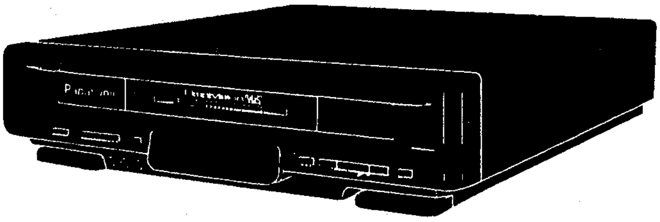
ORDER NO. MKS9302M337
B3

Service Manual

Video Cassette Recorder

Panasonic
Omnivision VHS

PV-4308/PV-4311
PV-4315S/PV-4325S
PV-4351/PV-4358
PV-4355S/PV-4311-K
PV-4351-K



ITEM	SPECIFICATION	1	2
Power	Source : 120V AC ±10% 60Hz ±0.5%	○	○
	Consumption : 19 watts	○	–
	23 watts	–	○
Video	Head : 4 rotary heads helical scanning system	○	○
	Input Level :VIDEO IN Jack (Phono type) 1.0 Vp-p 75Ω unbalanced Output Level :VIDEO OUT Jack (Phono type) 1.0 Vp-p 75Ω unbalanced Signal-to-Noise Ratio : SP : more then 43dB LP/SLP : more than 41dB Horizontal Resolution : Color/Monochrome : more than 230 lines	○	○
Audio	Head: Normal Mono : 1 stationary head	○	○
	Hi-Fi Stereo : 2 rotary heads	–	○
	Input Level : AUDIO IN Jack (Phono type) - 10dBV 50kΩ unbalanced	○	○
	Output Level : AUDIO OUT Jack (Phono type) - 8dBV 600Ω unbalanced	○	–
	Output Level : AUDIO OUT Jack (Phono type) - 8dBV 1kΩ unbalanced	–	○
	Frequency Response: Normal Mono : SP : 100Hz ~ 8kHz	○	○
	LP : 100Hz ~ 6kHz	○	○
	SLP : 100Hz ~ 5kHz	○	○
	Hi-Fi Stereo : SP/LP/SLP : 20Hz ~ 20kHz	–	○
	Signal-to-Noise Ratio : Normal Mono : SP : more than 42dB	○	○
	LP/SLP : more than 40dB	○	○
	Hi-Fi Stereo : SP/LP/SLP : more than 60dB	–	○
	Wow and Flutter : Normal Mono : SP : Less than 0.2% WRMS	○	○
	LP : Less than 0.3% WRMS	○	○
	SLP : Less than 0.4% WRMS	○	○
	Hi-Fi Stereo : Less than 0.015% WRMS	–	○

ITEM	SPECIFICATION	1	2
RF Out	CH 3/CH 4 switchable 72dBµ (Open voltage) 75Ω unbalanced	○	○
Tuner	Broadcast Channels : VHF 2 ~ 13, UHF 14 ~ 69 CATV Channels : Midband A through I (14 ~ 22) : Superband J through W (23 ~ 36) : Hyperband AA ~ EEE (37 ~ 64) : Lowband A-5 ~ A-1 (95 ~ 99) : Special CATV channel 5A (01) : Ultraband 65 ~ 94, 100 ~ 125	○	○
Video Signal	EIA Standard (525 lines, 60 fields) NTSC Color Signal	○	○
Tape Speed	SP : 1-5/16 i.p.s (33.35mm/sec), LP : 21/32 i.p.s (16.67mm/sec), SLP : 7/16 i.p.s (11.12mm/sec) Record/Playback Time : 8 Hrs with 160min. type tape used in SLP mode FF/REW Time : Less 5min. (120min. type tape)	○	○
Tape Format	Tape width 1/2" (12.7mm) high density tape	○	○
Operating Condition	41°F(5°C) ~ 104°F(40°C) (Temperature) 10% ~ 75% (Humidity)	○	○
Dimension	14-15/16"(380mm) (W) x 3-1/2"(89mm)(H) x 11-1/2"(292mm) (D)	○	○
Weight	Approx. 8.6lbs (3.9kg)	○	–
	Approx. 8.8lbs (4.0kg)	–	○

1. PV-4308/PV-4311/PV-4315S/PV-4325S/PV-4311-K
2. PV-4351/PV-4358/PV-4355S/PV-4351-K

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

Panasonic®

Matsushita Services Company
Division of Matsushita
Electric Corporation
of America
50 Meadowland Parkway,
Secaucus, New Jersey 07094

Matsushita Electric
of Canada Limited
5770 Ambler Drive, Mississauga,
Ontario, L4W 2T3

Panasonic Company
(West) of America.
Division of Matsushita Electric
Corporation of America
6550 Katella Ave.
Cypress, CA 90630

Panasonic Sales Company,
Division of Matsushita Electric
of Puerto Rico, Inc.
San Gabriel Industrial Park
65th Infantry Ave. KM.9.5
Carolina, P.R.00630

Summary
Adjustment Procedures
Schematic Diagrams
Circuit Board Diagrams
Exploded Views
Replacement Parts List
Block Diagrams

MODEL	HEAD	Hi-Fi	AIP	FIP	FRONT A/V JACK
PV-4308	4	–	○	○	–
PV-4311	4	–	○	○	–
PV-4315S	4	–	○	○	○
PV-4325S	4	–	○	○	○
PV-4311-K	4	–	○	○	–
PV-4351	4	○	○	○	–
PV-4358	4	○	○	○	–
PV-4355S	4	○	○	○	○
PV-4351-K	4	○	○	○	–

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IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are important for safety. These parts are marked by ⚠ in the Schematic Diagrams, Circuit Board Diagrams, Exploded Views and Replacement Parts List. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire or other hazards. Do not modify the original design without permission of manufacturer.

SAFETY PRECAUTIONS

GENERAL GUIDELINES

1. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
2. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
3. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

LEAKAGE CURRENT COLD CHECK

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between 1MΩ and 5.2MΩ. When the exposed metal does not have a return path to the chassis, the reading must be ∞.

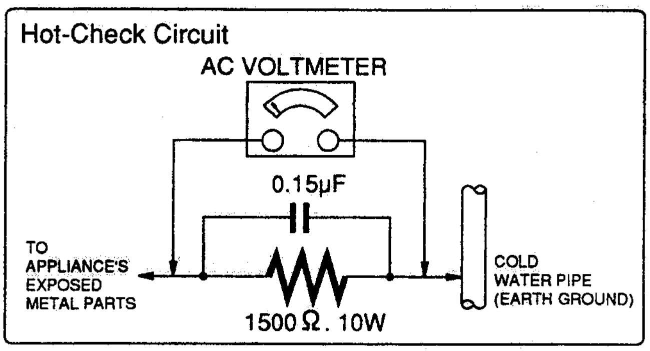

Hot-Check Circuit
AC VOLTMETER
0.15µF
TO APPLIANCE'S EXPOSED METAL PARTS
COLD WATER PIPE (EARTH GROUND)
1500Ω. 10W

Figure 1

LEAKAGE CURRENT HOT CHECK (See figure 1.)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a 1.5KΩ, 10 watts resistor, in parallel with a 0.15µF capacitor, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in figure 1.
3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 or equivalent) may be used to make the hot checks, leakage current must not exceed 1/2 milliamp. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

PREVENTION OF ELECTRO STATIC DISCHARGE (ESD) TO ELECTROSTATICALLY SENSITIVE (ES) DEVICES

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by electro static discharge (ESD).

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device. Some solder removal devices not classified as "antistatic (ESD protected)" can generate electrical charge sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
   CAUTION : Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient to damage an ES device).

"NOTE to CATV system installer:
This reminder is provided to call the CATV system installer's attention to Article 820-22 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical."

Model : F, G, H, I

Equipped with dbx® - TV Noise Reduction for true MTS reproduction. dbx® - TV Noise Reduction is required for good stereo separation and audio fidelity.

I. SUMMARY

A. BASIC OPERATIONS

One Time Set Ups

- When the VCR is turned on, on screen displays will instruct you to choose a language, place channels in memory and set the clock.

Place Channels in Memory Main Operation

Press ▲ **or** ▼
to select the desired language for on-screen displays, English or Spanish.

SELECT LANGUAGE
PUSH CH UP ENGLISH
PUSH CH DOWN ESPANOL

Then, press ▲
to start Auto Set.

- Normal or Cable channels are automatically placed in memory.
- This screen should appear followed by the lowest numbered channel and finally a prompter to set the clock. "IS ANTENNA CABLE CONNECTED PROPERLY?" appears if no active channels were located.

CHANNEL AUTO SET
CONNECT ANTENNA CABLE
THEN
PLEASE PUSH CH UP KEY

CH AUTO SET COMPLETED

If your Antenna System Changes

For example, if you have cable installed, you can revise the channel memory by completing the following steps.

1 Press MENU
to select the menu screen.

2 Press ②
to select CHANNEL AUTO SET

3 Press ①
to select "TV" (normal antenna) or "CATV" (cable TV).

4 Press ②
to start Auto Set.

SELECT MENU NUMBER
USING REMOTE 1-4 KEY
1 PROGRAM REVIEW
2 CHANNEL AUTO SET
3 SET AUDIO MODE
4 IDIOMA (ENGLISH)
TO END PUSH MENU KEY

CHANNEL AUTO SET
ANTENNA SYSTEM TV
PUSH 1 TV → CATV
PUSH 2 AUTO SET
TO END PUSH MENU KEY

To Add or Delete a Channel

Select a channel
using the NUMBERED keys on the remote control.

Then, press ADD/DLT
to add or delete the channel.

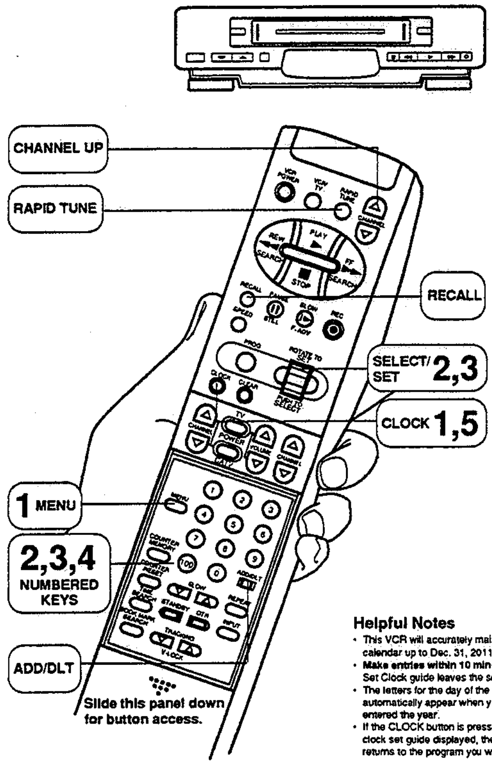
- To select a deleted channel, use the NUMBERED keys on the remote control. Each time a deleted channel is selected, it will flash in the Multi Function Display.

CHANNEL 10 DELETED
↕ or
ADDED

Rapid Tuning

Press RAPID TUNE ○
to instantly select the last channel you were watching.

Previous channel CH08 ←→ CH10 Present channel



Slide this panel down for button access.

Helpful Notes

- This VCR will accurately maintain its calendar up to Dec. 31, 2011, 11:59PM.
- **Make entries within 10 minutes, or the** Set Clock guide leaves the screen.
- The letters for the day of the week will automatically appear when you have entered the year.
- If the CLOCK button is pressed with the clock set guide displayed, the TV screen returns to the program you were watching.

Set the Clock

1 Press CLOCK
to select the SET CLOCK screen. The month is flashing.

SET CLOCK
1/--/---- --:--
DST ON
SET MONTH
BY ROTATING WHEEL
NEXT, PUSH WHEEL OR
TO END PUSH CLOCK KEY

2 Rotate SELECT/SET
in either direction to change the numbers of the month.

SET CLOCK
2/--/---- --:--
DST ON
SET MONTH
BY ROTATING WHEEL
NEXT, PUSH WHEEL OR
TO END PUSH CLOCK KEY

3 Press SELECT/SET **(like a button)**
to lock in your entry and move on to the next item.

SET CLOCK
2/1/
DST ON
SET DATE
BY ROTATING WHEEL
NEXT, PUSH WHEEL OR
TO END PUSH CLOCK KEY

4 Repeat steps 2 and 3.
to set the Date, Year, Hour, Minute and D.S.T. (Daylight Saving Time).

- When the year is entered, the day of the week automatically appears.
- When "DST:ON" is selected, the clock will automatically adjust for Daylight Saving Time. (See page 31 for details.)

5 Press CLOCK
to start the clock and exit the Set Clock mode.

SET CLOCK
2/2/1994 WED 1:30PM
DST ON
SET COMPLETED
TO CORRECT PUSH WHEEL
TO START PUSH CLOCK KEY

Corrections After Clock Is Started:
Press the CLOCK button.
Press the SELECT/SET wheel repeatedly until the item you want to change is flashing. Rotate the wheel to change the numbers.
Press the CLOCK button to restart the clock.

Display the Time

Press RECALL ○
to display the overlay shown at right.

Press again to remove.
(See page 6.)

STOP 8:05AM CH 02
1:02:12

Basic Playback

Special Playback Features

Before you begin, make sure ...

- connections are made
- VCR is plugged in.

Basic Playback Operation

1 Turn TV on.
Select VCR Channel
(CH3 or CH4).

2 Insert a cassette
into the VCR.

- VCR power comes on automatically. Playback will begin if cassette has no record tab.

3 Press PLAY ►
to start playback.

VCR

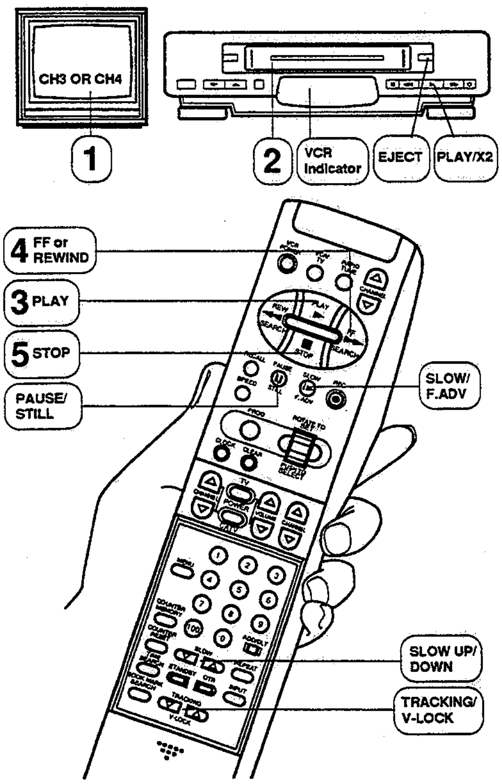
The VCR indicator appear in the Multi Function Display.

4 Press ◄◄ **or** ►►
to quickly locate a scene during playback.

- SP mode search speed is 9 times and SLP mode is 27 times the normal speed.
  Some noise bars will appear during search.

5 Press STOP ■
to stop playback.

Then, press STOP/EJECT
on the VCR to eject the cassette.



Special Effects During Playback

These features work best in SP or SLP mode. Sound will be muted.

Double Speed Playback

Press PLAY/X2 ► **on the VCR.**
Press again to release.

Slow Motion Playback

Press SLOW/F.ADV

Press SLOW ▼ ▲
to vary the tape speed.

Press PLAY ►
to release.

Still Frame Picture

Press PAUSE/STILL
Press again to release.

Frame Advance

Hold down SLOW/F.ADV
in Still mode to advance the still picture one frame at a time.

Other Features for a Quality Picture

Digital Auto Picture

This feature automatically controls the video output signal for improved picture resolution or less noise depending on the condition of the tape.

Digital Auto Tracking

This feature continuously analyzes the signal and adjusts for optimum picture quality.

Manual Tracking Control

During Playback, Slow Motion, and Double Speed Playback, use this feature to reduce noise in the picture.

Press TRACKING/V-LOCK ▼ ▲
until the picture clears up.

V-Lock Control

Use during Still mode to reduce jitter.

Press TRACKING/V-LOCK ▼ ▲
until the picture is stabilized.

Basic Recording

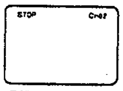
Before you begin, make sure ...
- connections are made
- VCR is plugged in.

Make a Simple Recording

1 Turn TV on.
Select VCR Channel
(CH3 or CH4)

2 Insert a cassette
with record tab
- VCR power comes on automatically

3 Press INPUT
until channel number appears on-screen.


```
STOP          CH02
```

4 Press SPEED
until the desired speed appears on-screen.

```
              SP
```

5 Press CHANNEL
to select a channel to be recorded.

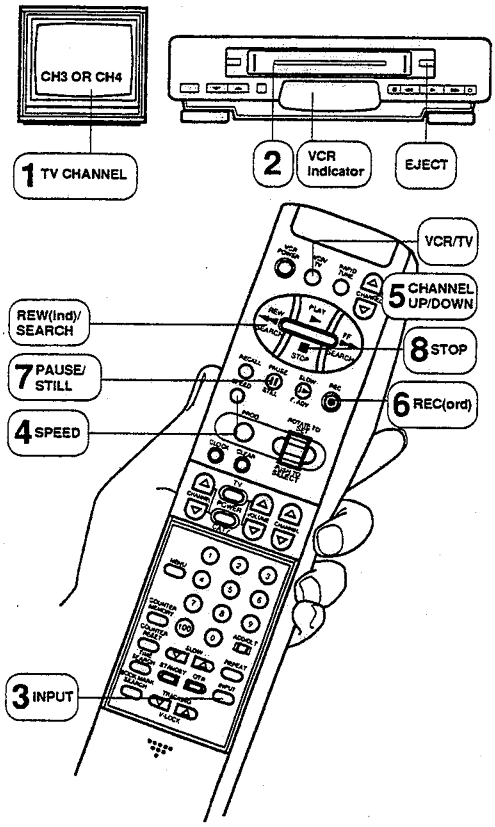
6 Press REC
to start recording.
- Or you may hold the REC button in and press the PLAY button on the VCR

7 Press PAUSE STILL
to pause or resume the recording.

8 Press STOP
to stop recording.

Then, press
to rewind the tape

Now, press STOP/EJECT
on the VCR to eject the tape.



Record One TV Program While Watching Another

Press VCR/TV
to turn off the VCR indicator in the Multi Function Display while the recording is in progress. The TV program being recorded will disappear.

Then, use the TV channel controls
to select a program for viewing.
The program you selected at the VCR will continue to be recorded while the channel you select with the TV controls appears on the screen. You can switch back and forth using the VCR/TV button anytime.

Select Channels at the VCR for Recording or Viewing

Turn TV on.
Select VCR Channel.
Channel 3 or 4

Then, press INPUT
to select channel number display.
If "LINE" appears, press the INPUT button again to change it.

Now, press CHANNEL
to select channels.

```
VCR
```
The VCR indicator lights in the Multi Function Display. If not, press the VCR/TV button to turn it on.

To select channels with the TV controls

Press VCR/TV
to turn the VCR indicator off.
Or simply turn the VCR off

One Touch Recording

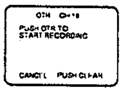
- Instant Recording with pre-set shut off time
- Standby Recording with pre-set Start time up to 11 30 PM the following day

Before you begin, make sure ...
- connections have been completed. • the clock is set to the correct time. • the desired tape speed (SP, LP, SLP) is selected. • the record tab is not missing on the cassette. • the tape is long enough.

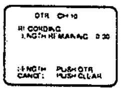
Set up an Instant OTR

1 Press
to enter the channel.
Or use the NUMBERED keys.
- Press the INPUT button to select LINE Input when recording an external source. "LINE" appears instead of the channel number.

2 Press OTR
to select the OTR Screen.
- **If the record tab is missing, the cassette will eject.**


```
OTR   CH10
PUSH OTR TO
START RECORDING

CANCEL   PUSH CLEAR
```

3 Press OTR
repeatedly.
to set the recording length and start the recording.


```
OTR   CH10
RECORDING
LENGTH REMAINING  0:30

LENGTH   PUSH OTR
CANCEL   PUSH CLEAR
```

- Each press will add 30 minutes "TO TAPE END" indicates that the recording will continue to the end of the tape.
- To do an Instant OTR at the VCR, hold down the REC button and press the CHANNEL UP key until the Length is set.

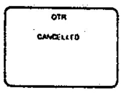
Enter a New Length

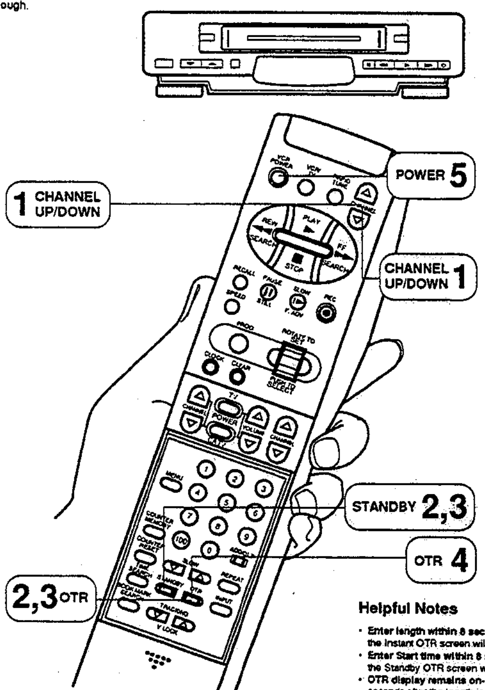
Repeat steps 2 and 3.

Cancel the OTR

Press OTR
to select the OTR Screen.

Then, press CLEAR
to cancel the OTR.
- The VCR will go into Stop mode


```
OTR

CANCELLED
```



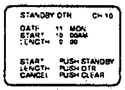
Helpful Notes

- **Enter length within 8 seconds.** If not, the Instant OTR screen will disappear
- **Enter Start time within 8 seconds,** if not, the Standby OTR screen will disappear
- **OTR display remains on-screen 8** seconds after the length is set.
- **Display remaining record time,** by pressing the OTR button once.
- **Check your times carefully,** so that you don't overlap a Timer Recording with a One Touch Recording.

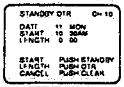
Set up a Standby OTR

1 Press
to enter the channel.
Or use the NUMBERED keys.
- Press the INPUT button to select LINE Input when recording an external source. "LINE" appears instead of the channel number.

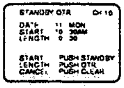
2 Press STANDBY
to select the Standby OTR Screen.


```
STANDBY OTR    CH 10
DATE     11  MON
START    10  00AM
LENGTH   0   00

START    PUSH STANDBY
LENGTH   PUSH OTR
CANCEL   PUSH CLEAR
```

3 Press STANDBY **repeatedly.**
to set the start time.


```
STANDBY OTR    CH 10
DATE     11  MON
START    10  30AM
LENGTH   0   00

START    PUSH STANDBY
LENGTH   PUSH OTR
CANCEL   PUSH CLEAR
```

4 Press OTR **repeatedly.**
to set the recording length.


```
STANDBY OTR    CH 10
DATE     11  MON
START    10  30AM
LENGTH   0   30

START    PUSH STANDBY
LENGTH   PUSH OTR
CANCEL   PUSH CLEAR
```

- To do a Standby OTR at the VCR, hold down the REC button and press the CHANNEL DOWN key until the Start Time is set Set the Recording Length by holding down the REC button and pressing the CHANNEL UP key.
- "TURN VCR OFF FOR TIMER RECORDING" will appear on-screen

5 Press VCR POWER **off**
to set the Standby Timer.
- **If the record tab is missing,** the cassette will eject and Timer indicator TIMER will flash.

VCR Front Panel

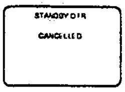
The TIMER indicator lights in the Multi Function Display.

Cancel a Standby OTR

Standby OTR has been set, or is in progress:

Press STANDBY **or** OTR
to display the Standby OTR contents.

Then press CLEAR
to cancel the Standby OTR


```
STANDBY OTR

CANCELLED
```

Timer Recording

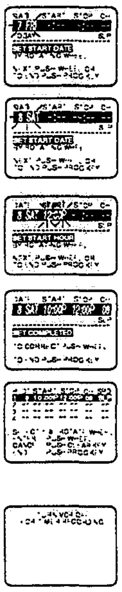
- *Record a program up to one month away.*
- Record daily, Monday through Friday.
- Record weekly at the same time.

Before you begin, make sure ...

• connections are made (see separate Connection Guide) • TV and VCR are plugged in • VCR/TV selector is set to "VCR" • clock is set • tape is long enough • *record tab is in place* • *selections are made within 5 minutes or VCR leaves this mode*

Set up a Timer Recording Main Operation

TV Screen



1 Press
to display this screen (If a program has already been set, the screen in step 5 will appear.)

2 Rotate
to set a Start Date
·To set up a Daily or Weekly Timer Recording.

3 Press **(like a button)**
to lock in your entry and move on to the next item

4 Repeat steps 2 and 3
to set the *Start Time*, *Stop Time*, Channel to be recorded and Record Speed (SP, LP, SLP)

5 Press
to finish the program
"PROGRAM COMPLETED" will appear followed by this screen

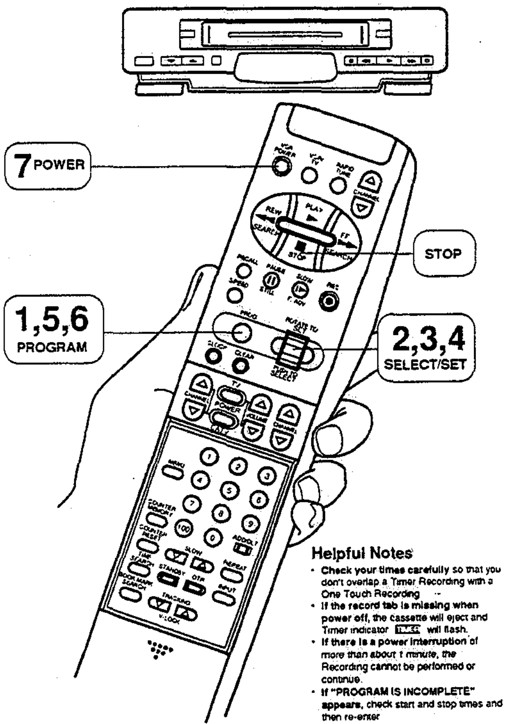
Select the next program by rotating and pressing the wheel then repeat steps 2-5.

6 Press again
to exit the programming mode
- This reminder appears

7 Press off
to set the Timer

VCR Front Panel

The TIMER indicator lights in the Multi Function Display

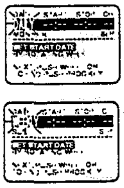


Helpful Notes

- **Check your times carefully** so that you don't overlap a Timer Recording with a One Touch Recording
- **If the record tab is missing when power off,** the cassette will eject and Timer indicator TIMER will flash.
- **If there is a power interruption** of *more than about 1 minute, the* Recording cannot be performed or continue.
- **If "PROGRAM IS INCOMPLETE" appears,** check start and stop times and then re-enter
- **When recording from an external source,** rotate the wheel until "L" appears instead of the Channel

Set up a Daily or Weekly Timer Recording

In step



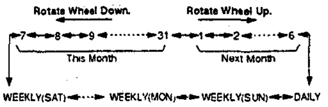
Rotate
until DAILY or WEEKLY appears in place of the Date

For a weekly recording, rotate the wheel *until the desired day of the week appears*

Then, continue
with steps 3-7

Making a Daily or Weekly Selection

For example, if today were the 7th



Make Corrections While Programming:

Press the wheel repeatedly to move to the desired item then rotate it to change the numbers

Cancel a Timer Recording in Progress

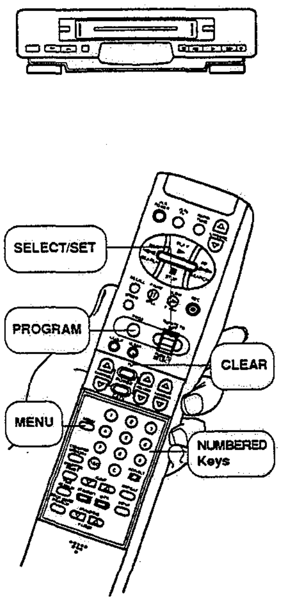
Press

Then, press
within 10 seconds to cancel the Timer Recording.

Now, press
to turn the VCR OFF.

- Any future daily or weekly recordings will be performed as programmed.

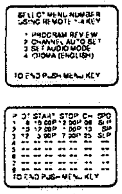
Timer Recording
continued



Helpful Note

- Another way to review program contents is to press the PROGRAM button while a timer recording is in progress.

Review Program Contents



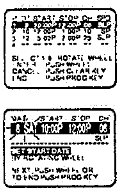
Press
to display the Menu screen

Then, press
to display all currently set programs

Now, press twice
to return to the TV screen

Replace Program Contents

(Recording is not in progress.)



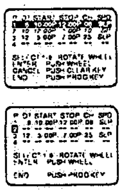
Press
to display all currently set programs

Then, rotate and press
to select and open the *desired program.*

Now, do steps 2-7

Clear Program Contents

(Recording is not in progress.)



Press
to display all programs

Next, rotate
to select the desired program number

Then, press
to clear the program

Now, press
to return to the TV screen

B. SERVICE NOTES AND CAUTIONS

When servicing, note the following items.

A. Cylinder Rotation in STOP mode

The cylinder will continue to rotate for approximately 10 minutes after the STOP button is pressed in Play mode etc. Eject the tape in order to stop the cylinder.

B. Service Position

B-1. Service Position (1)

Service position (1) is used to check the Mechanism and Electronic Circuits.
In this position, check the movement of mechanical parts on the Mechanism Chassis and replace parts as needed.
In this position, limited checking of the electronic circuit on the Main C.B.A. from the component side of the board is possible using the screening on the foil pattern.
To position the VCR Unit for servicing as shown in Fig. 1-1, use the following procedure.

1) In the order described in the Disassembly of Cabinet Parts section, remove the Top Cover and Front Panel Unit.
2) Remove Screw (S-5) in Fig. D4, Page 2-2.
3) Remove 2 Screws (S-6), 2 Screws (S-7), Screw (S-8), Screw (S-9), Screw (S-10), and the Chassis Plate in Fig. D7, Page 2-3.
4) Remove 2 Screws (S-12) in Fig. D8, Page 2-3.
5) Raise the Mechanism Chassis and secure it using the Chassis Plate which was used to secure the Mechanism Chassis on the Frame.

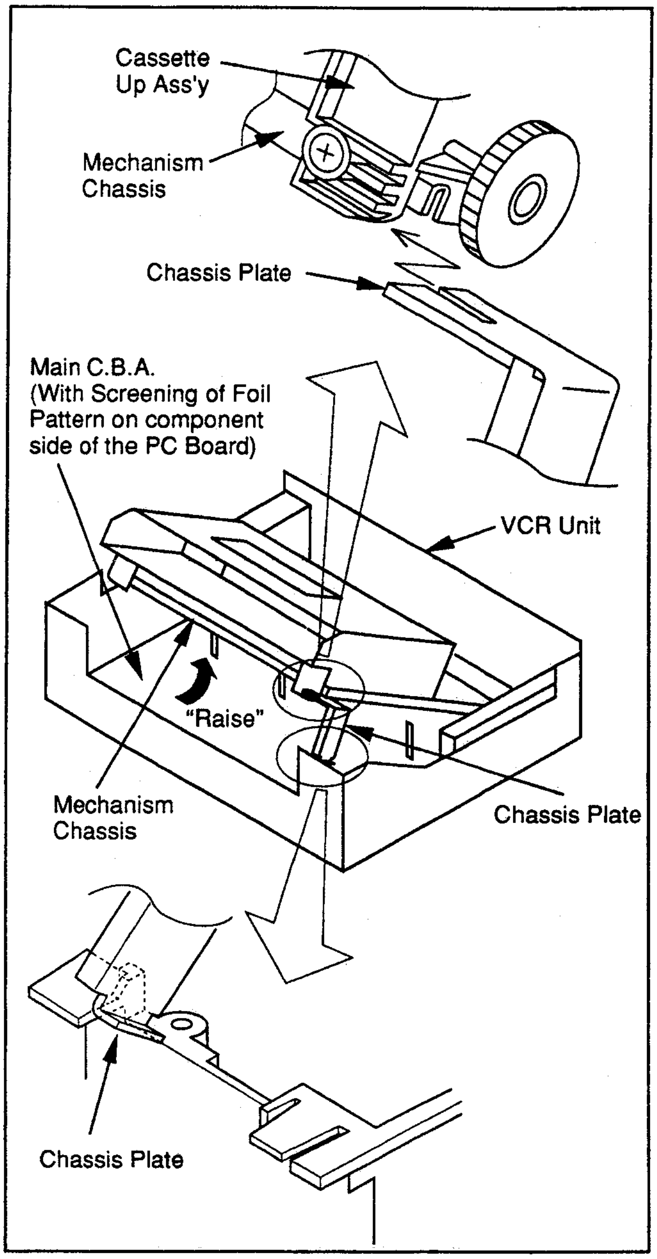

Cassette Up Ass'y
Mechanism Chassis
Chassis Plate
Main C.B.A. (With Screening of Foil Pattern on component side of the PC Board)
VCR Unit
"Raise"
Mechanism Chassis
Chassis Plate
Chassis Plate

Fig. 1-1

B-2. Service Position (2)

Service Position (2) is used for checking and replacing Mechanical and Electrical parts.
To position the VCR Unit for servicing as shown in Fig. 1-2, use the following procedure.

1) In the order described in the Disassembly of Cabinet Parts section, remove the Top Cover, Power Supply Ass'y, Front Panel Unit, and Operation I and II C.B.A.s : Model A, B, C, D, F, G, H or Timer / Operation I and II C.B.A.s : Model E, I
2) Remove Screw (S-4) and Screw (S-5) in Fig. D4, Page 2-2.
3) Remove 2 Screws (S-6), 2 Screws (S-7), Screw (S-8), Screw (S-9), Screw (S-10), 2 Screws (S-11), and the Chassis Plate in Fig. D7, Page 2-3.
4) Remove the VCR Chassis Unit. Refer to NOTE Item 5 and 6.
5) Remove 2 Screws (S-12) in Fig. D8, Page 2-3.
6) Open the Mechanism Chassis and Cassette Up Ass'y.
7) Place the right side of the Cassette Up Ass'y on the front side of the Frame as shown in Fig. 1-2.
8) Reinstall the Operation I and II C.B.A.s : Model A, B, C, D, F, G, H or Timer / Operation I and II C.B.A.s : Model E, I.
9) Reinstall the Power Supply Ass'y as shown in Fig. 1-2 and Fig. 1-3-1 : Model A, B, C, D, E or Fig. 1-3-2 : Model F, G, H, I.
10) Place a jumper between TP6001 and GND.

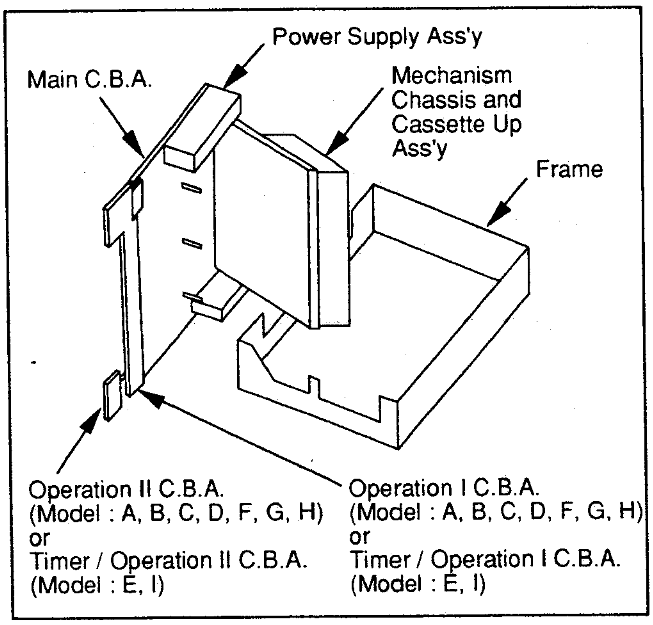

Power Supply Ass'y
Main C.B.A.
Mechanism Chassis and Cassette Up Ass'y
Frame
Operation II C.B.A.
(Model : A, B, C, D, F, G, H)
or
Timer / Operation II C.B.A.
(Model : E, I)
Operation I C.B.A.
(Model : A, B, C, D, F, G, H)
or
Timer / Operation I C.B.A.
(Model : E, I)

Fig. 1-2

Note:

1. When placing the unit into the Service Position (2), Beats may be seen in the picture. However, when the Red Screw between the Main C.B.A. and the Power Supply Ass'y is tightened, the Beats in the picture will be eliminated. So, place a short ground jumper wire between the Power Supply Ass'y and the Main C.B.A. while operating in the Service Position (2).
2. When servicing in Service Position (2), do not use a T160 tape. It may cause a Tape Jam.
3. If misloading of the cassette tape is encountered in this position, press the Cassette Tape firmly into the Cassette Up Ass'y with your left thumb.
4. **To install the Power Supply Ass'y to the Main C.B.A.:**

   Connect connector P1001 and hook the tab of the Shield Case to the slot of the Main C.B.A. as shown in Fig. 1-3-1 : Model A, B, C, D, E or hole of the Main C.B.A. as shown in Fig. 1-3-2 : Model F, G, H, I.
   (For early products, the tab must be bent backwards in order to connect properly.)

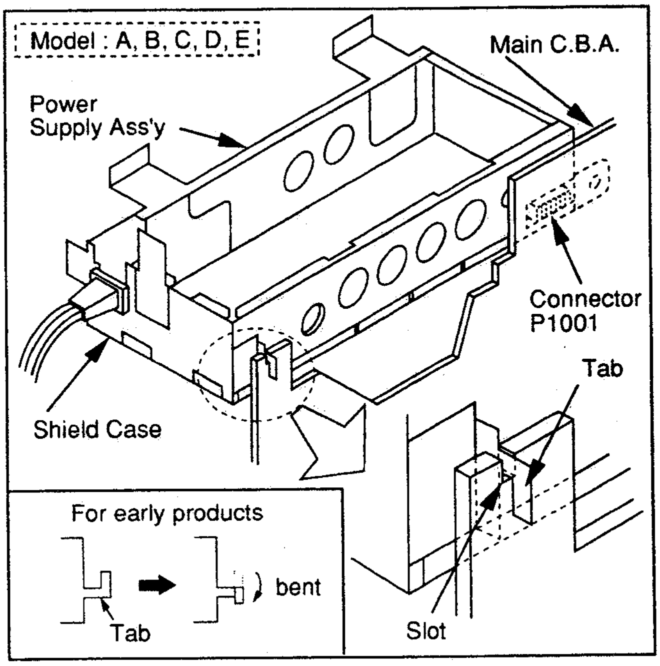

Model : A, B, C, D, E
Main C.B.A.
Power Supply Ass'y
Connector P1001
Tab
Shield Case
For early products
bent
Tab
Slot

Fig. 1-3-1

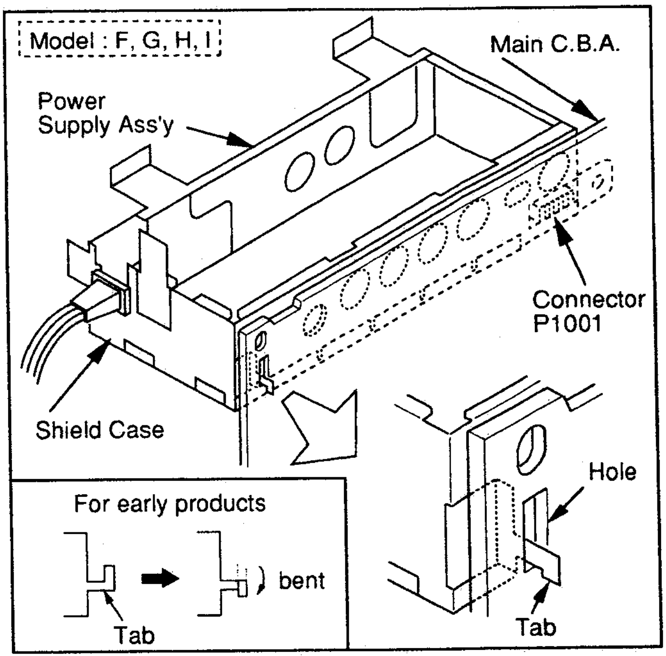

Model : F, G, H, I
Main C.B.A.
Power Supply Ass'y
Connector P1001
Shield Case
Hole
For early products
bent
Tab
Tab

Fig. 1-3-2

5. **To remove the VCR Chassis Unit from the frame:**

1) While pressing in on the locking tab Ⓐ, lift the Side Plate-R of Cassette Up Ass'y Ⓑ until the edge of Main C.B.A. clears the locking tab.
2) Lift the Side Plate-L Ⓒ until even with the Side Plate-R. Then lift entire VCR Chassis Unit out from the frame.

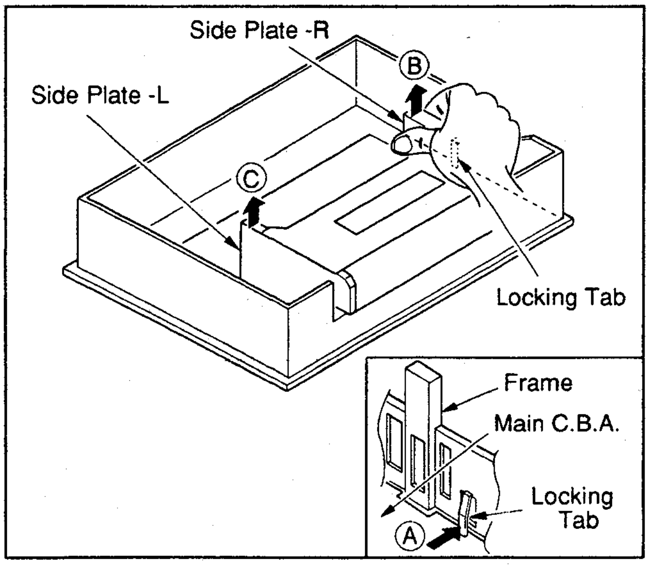


Fig. 1-4

6. When lifting up the VCR Chassis Unit, do not pull up on the Top Plate of the Cassette Up Ass'y.

7. Model : F, G, H, I

When reinstalling the VCR Chassis Unit, make sure that the Support Angle on Hi-Fi Audio C.B.A. is lined up with the Guide Rib of the frame.

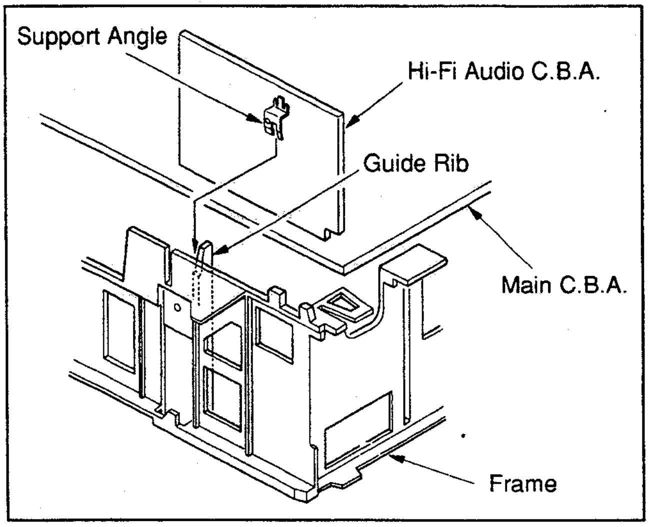


Fig. 1-5

B-3. Procedure for Closing Mechanism Unit on Main C.B.A.

Align the Sensor LED with the hole in the Mechanism Chassis by gently pushing the Sensor LED backward with your hand. Refer to Fig. 1-6.

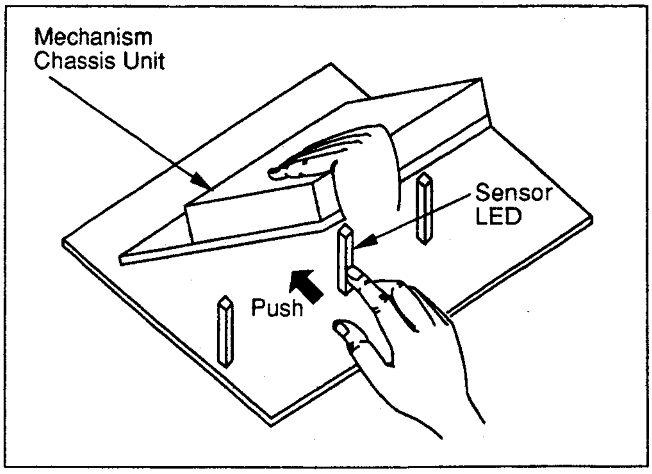


Fig. 1-6

C. Test Point Information

C-1. Actual Board on VCR

With this model, component leads or a jumper wire across a hole in the P.C.B. are used as Contact Points for adjustment and checking. In case there are other Test Points with no Test Pin or component leads, use the foil solder pad for connection of the measuring equipment.
Some TPs are indicated on both the Component and Foil Side of the P.C.B.. Some of these TPs are positioned differently on the Component and Foil Sides but they are on the same signal path.

C-2. Schematic and C.B.A. Diagrams in this Service Manual

⦶ : Test Point with a jumper wire across a hole in the P.C.B.
□→ : Test Point with a component lead on the Foil Side.
⊘ : Test Point with no Test Pin.
● : Test Point with a Test Pin.

C-3. Location of Test Points on Page 2-40

⦶ : Test Point with a jumper wire across a hole in the P.C.B.
○ : Test Point with no Test Pin (Foil Solder Pad).
● : Test Point with a Test Pin.
◑ : Test Point with a component lead on the Foil Side.

D. Service of Capstan Motor Drive C.B.A.

When servicing, avoid touching IC2502 on the Capstan Motor Drive C.B.A. because it is **HOT** during normal operation.

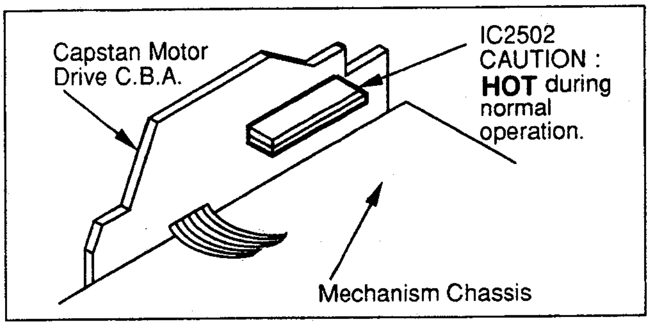

Capstan Motor Drive C.B.A.
IC2502
CAUTION :
HOT during normal operation.
Mechanism Chassis

Fig. 2

E. Connection of the Flat Cable to Trap Connector

Plug No.	Location of Trap Connector
P2503-P1541	A/C Head Unit

To the identify of Pin 1 of the Flat Cable, a different Color Identification Line is used.
To locate Pin 1 on the Trap Connector, find the pin 1 indicator on the A/C Head C.B.A.

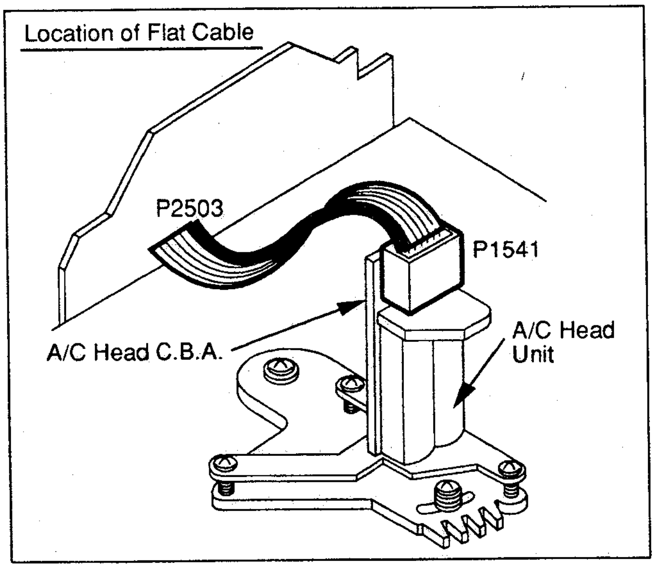

Location of Flat Cable
P2503
P1541
A/C Head C.B.A.
A/C Head Unit

Fig. 3

(Removal or Installation of the Flat Cable)

a. Removal

1. Pull out the Flat Cable. Minimize stress by holding it securely to avoid damage of the individual wires. (See Fig. 4.)

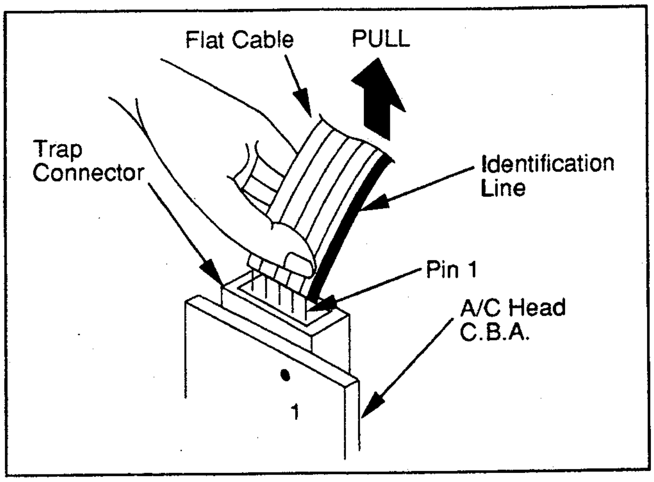

Flat Cable
PULL
Trap Connector
Identification Line
Pin 1
A/C Head C.B.A.
1

Fig. 4

b. Installation

1. Adjust the position of the Flat Cable so that the Identification Line on the Flat Cable aligns with Pin 1 of the Trap Connector in Fig. 4.
2. Align the individual wire with its individual Trap Connector Hole. Then insert the Flat Cable wire into the Trap Connector.

Note:
After installation, inspect the connection to ensure that an individual wire is not bent or touching another wire.

F. Removal/Installation of Mechanism Chassis to Main C.B.A.

Preparation
1) Remove Screw (S-5) in Fig. D4, Page 2-2.
2) Remove 2 Screws (S-6), 2 Screws (S-7), Screw (S-8), Screw (S-9), Screw (S-10), and the Chassis Plate in Fig. D7, Page 2-3.
2) Remove 2 Screws (S-12) in Fig. D8, Page 2-3.

a. Removal
Remove the Mechanism Chassis as follows.
1) Lift up the right rear corner while holding the Main C.B.A. to disconnect the right rear mechanism connector.
2) Lift up the left rear corner while holding the Main C.B.A. to disconnect the left rear mechanism connector.

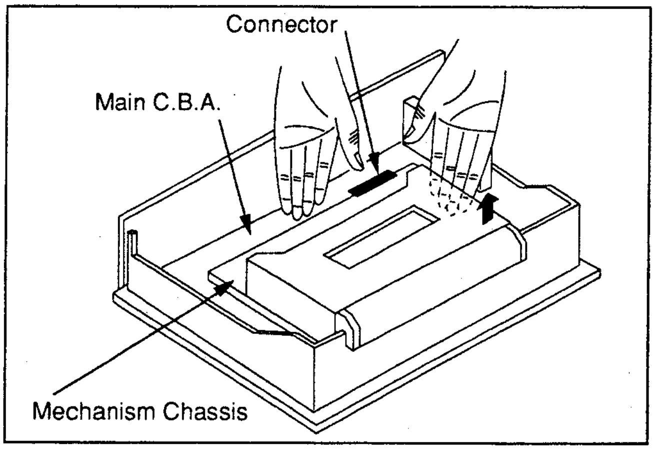

Connector
Main C.B.A.
Mechanism Chassis

Fig. 5-1-1

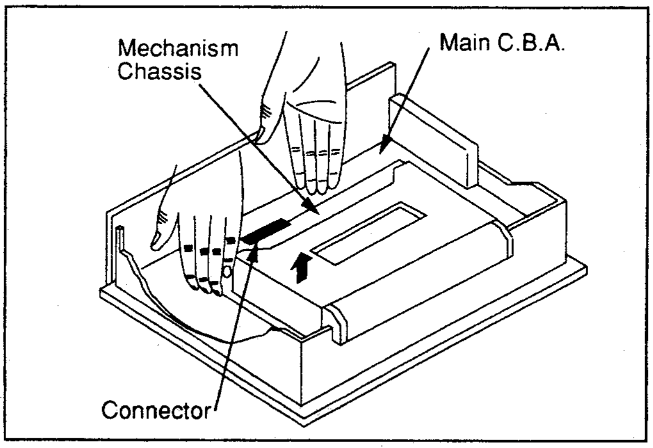

Mechanism Chassis
Main C.B.A.
Connector

Fig. 5-1-2

b. Installation

Connect the Mechanism Chassis to the Main C.B.A., as shown below. Be sure to press the rear portion of the mechanism chassis to insert connectors securely.

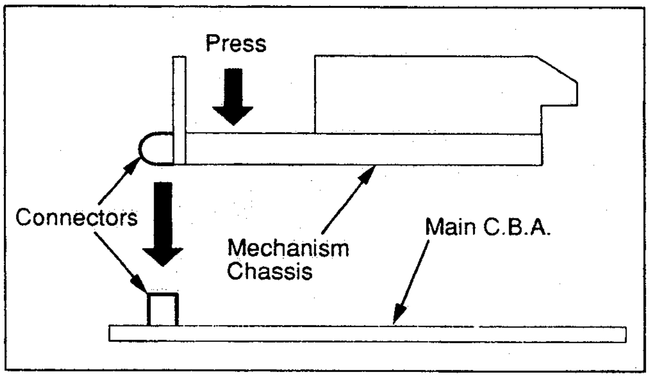

Press
Connectors
Mechanism Chassis
Main C.B.A.

Fig. 5-2

G. Microprocessor Judgment Point

This model has the Microprocessor judgment system to improve the accuracy of microprocessor replacement if the unit malfunctions.

1. IC6001 Judgment
   Use TP6016 on the Main C.B.A. as a check Terminal for judgment of the microprocessor. The microprocessor is OK if there is Scan pulse output. See Fig. 6-1.

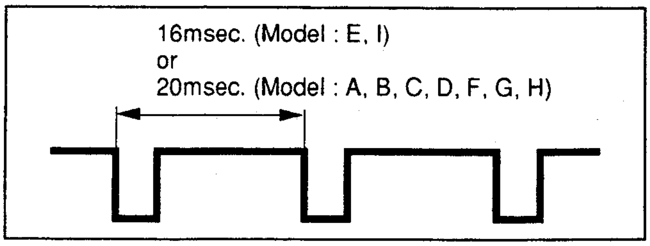

16msec. (Model : E, I)
or
20msec. (Model : A, B, C, D, F, G, H)

Fig. 6-1

2. IC7501 Judgment
   Use TP7506 on the
   Operation I C.B.A. : Model A, B, C, D, F, G, H
   or Timer/Operation I C.B.A. : Model E, I as a check Terminal for judgment of the microprocessor.
   The microprocessor is OK if there is pulse output as shown below.

   Note : Model : A, B, C, D, F, G, H
   Press any key(PLAY, STOP etc.) for this judgment.

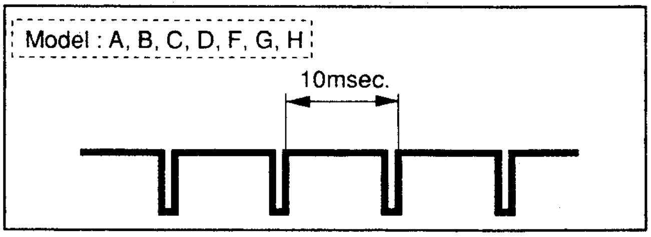

Model : A, B, C, D, F, G, H
10msec.

Fig. 6-2

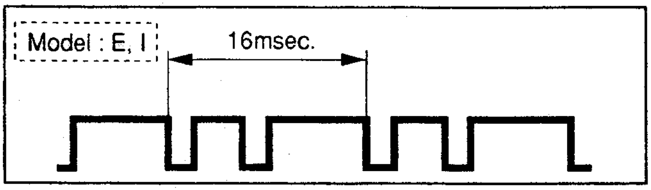

Model : E, I
16msec.

Fig. 6-3

H. Simplified Fault Finding Point

This model has the Simplified Self-Diagnostic System to facilitate finding the cause if the unit shuts off or stops automatically.

Method 1

Press FF button on the VCR when the Unit shuts off or stops automatically.
The trouble is indicated with code numbers listed below in the F.I.P. as shown in Fig. 7.

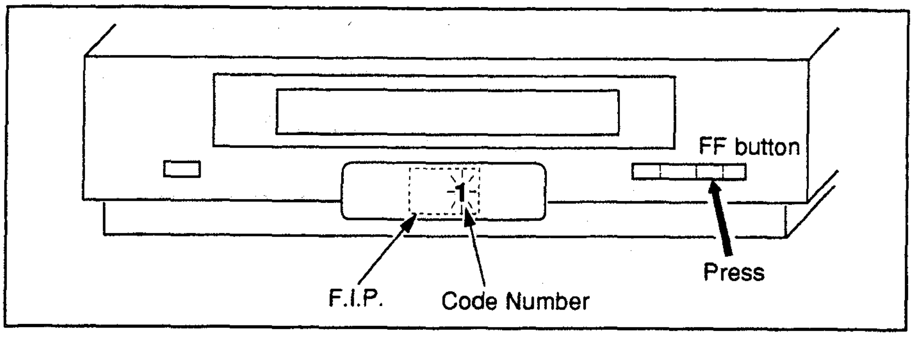
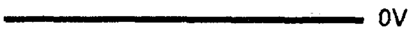
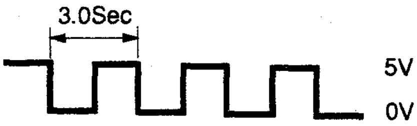
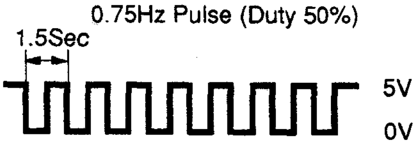
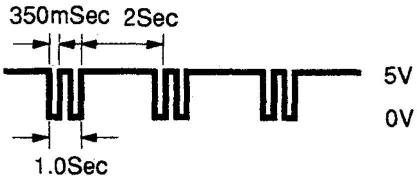


Fig.7

Method 2

Connect the Oscilloscope probe to TP6002 on the Servo Section of the Main C.B.A.
The Signal at TP6002 indicates the following causes.

Note:
Under normal conditions, a DC +5V Signal at TP6002 is displayed.

Code No.	Information	Indication	Cause and Characteristic
1.	Takeup Reel Lock	Low Voltage  	There is no TAKEUP REEL Sensor Pulse for 5 seconds or 1 second (only in SEARCH MODE). (Takeup Reel Sensor Pulse at pin 68 of IC6001)
2.	Cylinder Lock	0.3Hz Pulse (Duty 50%)  	Cylinder Motor stops in the REC, PB, CUE, REVIEW, SLOW, or STILL mode for 1 second. (Cylinder Lock (L) signal is detected inside IC6001)
3.	Exceeds Loading/Unloading Time	0.75Hz Pulse (Duty 50%)  	Loading/Unloading time exceeds the normal loading/unloading time, with no shift to the next mode. (Position signals supplied from Mode Select Switch to pins 78-81 of IC6001)
4.	Exceeds Cassette Loading/Unloading Time	Intermittent Pulse  	Cassette loading/unloading time exceeds the normal cassette loading /unloading time, with no shift to the next mode. (Cassette Up(H)/Down(L) signal at pin 70 : Model A, B, C, D, F, G, H pin 77 : Model E, I of IC6001)

I. How to Remove a Jammed Tape

A. Electrical Method

1. In the order described in the Disassembly of Cabinet Parts section, remove the Top Cover, Front Panel Unit and Operation I and II C.B.A.s : Model A, B, C, D, F, G, H , Timer / Operation I and II C.B.A.s : Model E, I .
2. Cut the wire to open Jumper(J6001) on the System Control section of the Main C.B.A. from the component side. (Refer to Fig. 8-1: Model A, B, C, D, E , Fig. 8-2 : Model F, G, H or Fig. 8-3: Model I .)

   Note:
   It is unnecessary to cut both two wires (J6001 and J6002).

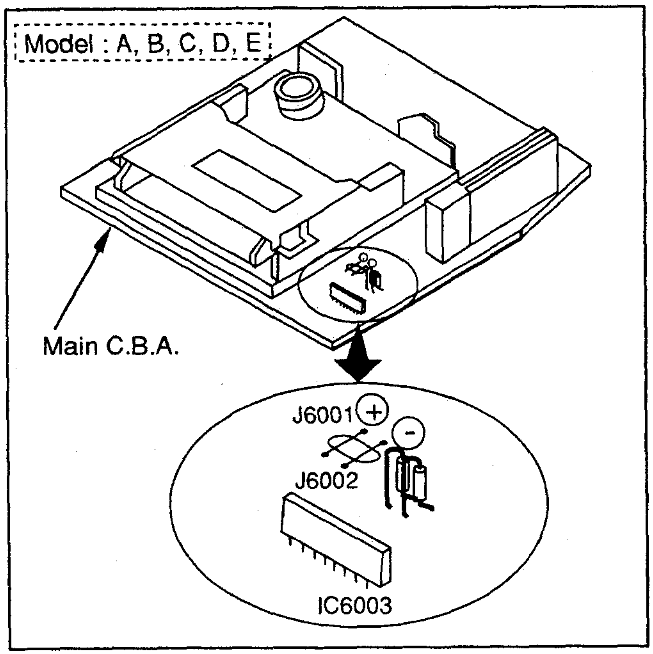

Model : A, B, C, D, E
Main C.B.A.
J6001 ⊕
⊖
J6002
IC6003

Fig. 8-1

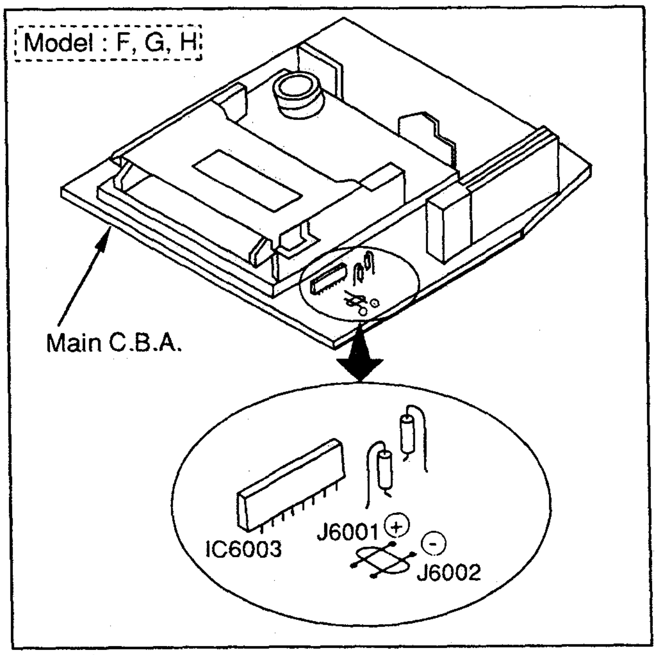

Model : F, G, H
Main C.B.A.
IC6003
J6001 ⊕
⊖
J6002

Fig. 8-2

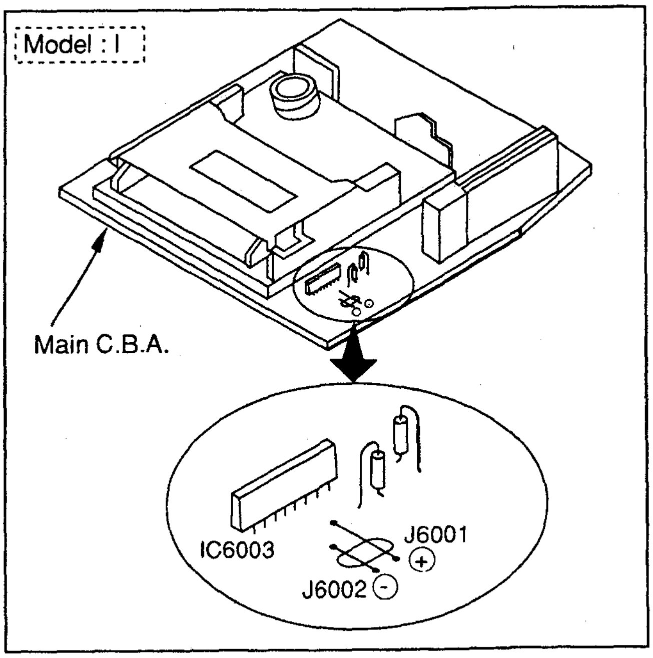

Model : I
Main C.B.A.
IC6003
J6001
⊕
J6002 ⊖

Fig. 8-3

3. Connect a DC Power Supply to the wires as shown in Fig. 9-1: Model A, B, C, D, E , Fig. 9-2 : Model F, G, H or Fig. 9-3: Model I , then adjust the voltage to 6.0 ± 0.1 VDC to start the unloading operation sequence.
4. When the tape Loading Arms are returned to the fully unloaded position, disconnect the DC Power Supply Unit.

   Note:
   Be careful not to let the DC power supply Unit GND contact chassis GND. This may damage the Loading Motor Drive IC.

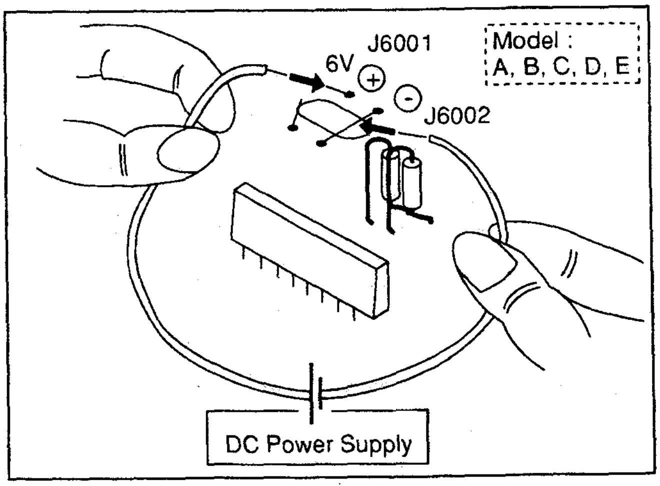

J6001
6V ⊕
⊖ J6002
Model : A, B, C, D, E
DC Power Supply

Fig. 9-1

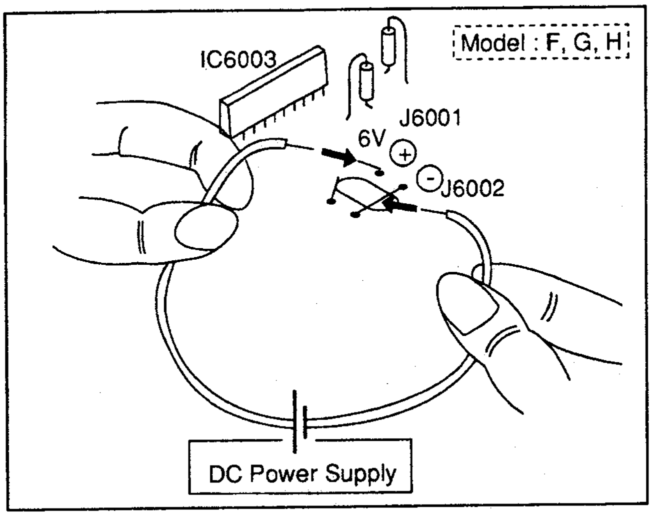

Model : F, G, H
IC6003
J6001
6V
+
-
J6002
DC Power Supply

Fig. 9-2

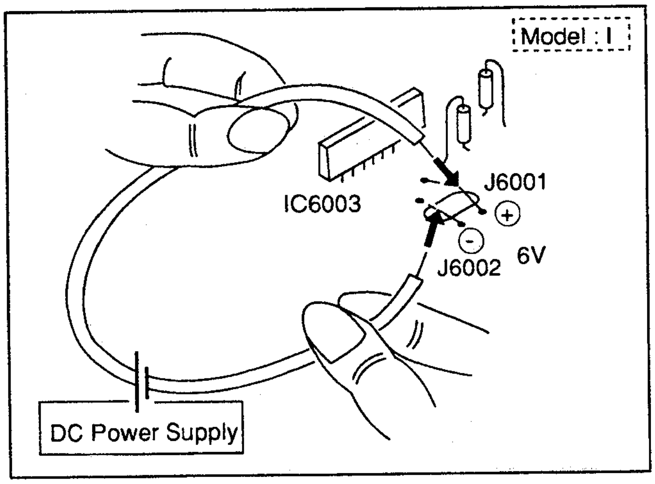

Model : I
J6001
IC6003
+
-
J6002
6V
DC Power Supply

Fig. 9-3

5. To wind the tape slack into the cassette, turn the Capstan Pulley counterclockwise at the VCR hole as shown in Fig.10.

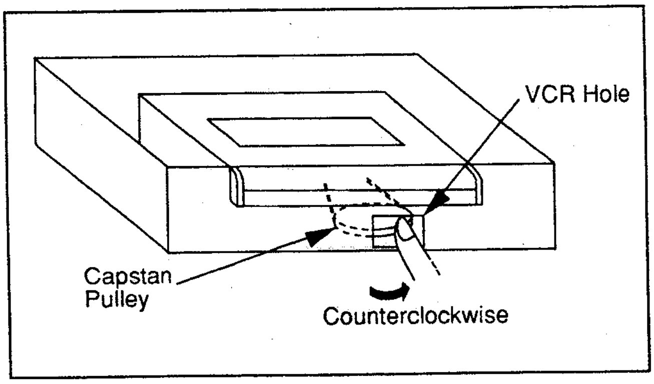

VCR Hole
Capstan Pulley
Counterclockwise

Fig.10

6. Then eject the Tape using the DC Power Supply again.
7. After completion of the procedure, resolder the jumper wire (J6001) that was opened.

B. Manual Method

1. In the order described in the Disassembly of Cabinet Parts Section, remove the Top Cover, Front Panel Unit, and
   Operation I and II C.B.A.s : Model A, B, C, D, F, G, H ,
   Timer / Operation I and II C.B.A.s : Model E, I .
2. Remove Screw (S-5) in Fig. D4, Page 2-2.
3. Remove 2 Screws (S-7) in Fig. D7, Page 2-3.
4. Remove 2 Screws (S-12) in Fig. D8, Page 2-3.
5. Remove 2 Screws (S-13) and 2 Screws (S-14) in Fig. D9, Page 2-3.
6. Lift up the Cassette Up Ass'y carefully. Remove 2 Screws (S-6), Screw (S-8), Screw (S-9), Screw (S-10), and the Chassis Plate in Fig. D7.
7. Reinstall the Cassette Up Ass'y to the Mechanism Chassis tightening 2 Screws (S-13) and 2 Screws (S-14) in Fig.D9.
8. Remove Mechanism Chassis from Main C.B.A.
9. Turn the Loading Pulley of Motor Block Ass'y clockwise until the tape Loading Arms are returned to the fully unloaded position.
10. To wind the tape slack into the cassette, turn the Capstan Pulley counterclockwise at the VCR hole as shown in Fig. 10.
11. Turn the Loading Pulley of Motor Block Ass'y clockwise again to Eject the cassette.

J. Method for Manual Loading / Unloading of VCR

Turn the Loading Pulley of the Motor Block Ass'y (shown in Fig. 11) counterclockwise (for loading) or clockwise (for unloading) as viewed from the Front Side.

Note :
Do not apply +12V to the Terminals of the Loading Motor Unit on the Motor Block Ass'y.

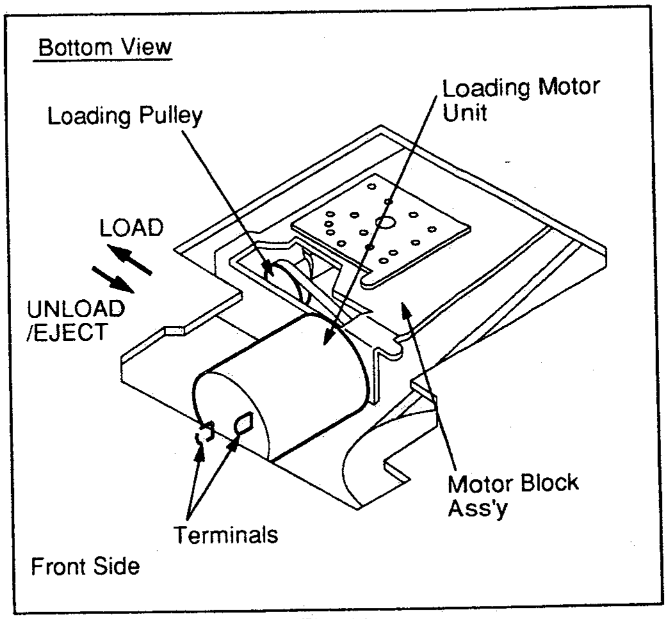

Bottom View
Loading Pulley
Loading Motor Unit
LOAD
UNLOAD /EJECT
Motor Block Ass'y
Terminals
Front Side

Fig. 11

K. How to place the Cassette Holder in the Down Position without a Cassette Tape

To place the Cassette Holder in the down position without a cassette tape, use the following procedure.

Method 1 - Refer to Fig. 12

1. Disconnect the AC Cord.
2. Place the Unit in the Service Position (1).
3. Remove Screw (A) and lift (Do Not Remove) the Grounding Plate to access the right side First Locking Tab.
4. Turn the Loading Pulley counterclockwise (Front View) until the Top of Set Lever L and R is locked by the First Locking Tab–Left and Right.
5. Clear the First Locking Tab (Left and Right) by pressing down the top of the Set Lever L and R.
6. Turn the Loading Pulley counterclockwise (Front View) until the top of Set Lever L and R is locked by the Second Locking Tab (Left and Right).
7. Clear the Second Locking Tab (Left and Right) by pressing down the Top of the Set Lever L and R.
8. Continue to turn the Loading Pulley until the Cassette Down Position is obtained.

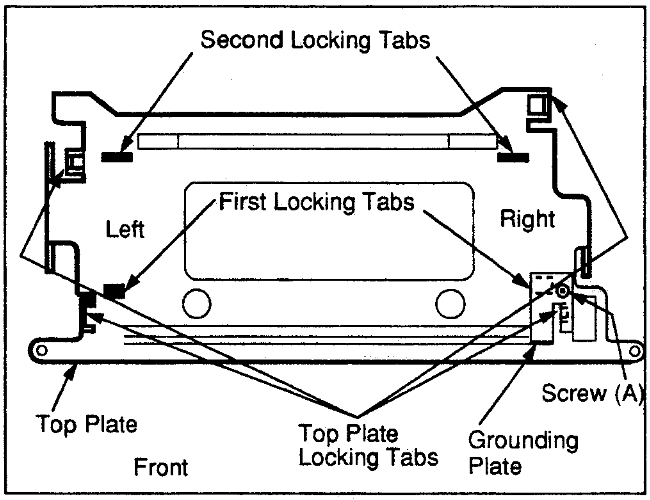


Fig. 12

Method 2 is an alternate method for loading with no tape.

Method 2 - Refer to Fig. 12

1. In the order described in the Disassembly of Cabinet Parts section, remove the Top Cover.
2. Place a jumper between TP6001on the System Control Section of the Main C.B.A. and GND.
3. Remove Screw (A) and lift (Do Not Remove) the Grounding Plate to access the right side First Locking Tab.
4. Connect the AC Cord.
5. The VCR turns ON automatically and the Cassette Holder is loaded. The top of Set Lever L and R is locked by the First Locking Tab–Left and Right. Then the VCR turns OFF.
6. Clear the First Locking Tab (Left and Right) by pressing down the top of the Set Lever L and R.
7. Turn ON the Power Switch.
8. The top of Set Lever L and R is locked by the Second Locking Tab (Same as Step 5).
9. Clear the Second Locking Tab (Left and Right) by pressing down the top of the Set Lever L and R.
10. Turn ON the Power Switch.
11. The Cassette Holder is in the down position and the loading operation is completed.

Method 3 is an alternate method for loading with no tape.

Method 3 - Refer to Fig. 12

1. In the order described in the Disassembly of Cabinet Parts section, remove the Top Cover, Front Panel Unit, and 2 Screws (S-7) in Fig.D7, Page 2-3.
2. Remove Screw (A).
3. Remove the Top Plate of the Cassette Up Ass'y by releasing the 4 Top Plate Locking Tabs shown in Fig. 12.

   Note :
   When removing the Top Plate of the Cassette Up Ass'y, work with care so as not to break the locking tabs shown in Fig. 12.

4. Place a jumper between TP6001 on the System Control Section of the Main C.B.A. and GND.
5. Plug in the AC cord and place the Cassette Holder in the down position. Then begin the loading operation sequence.

   Note :
   To place the Cassette Holder in the up position, push the STOP/EJECT Button to eject.

L. Black Screws on the Chassis

Black Screws are used on the Mechanism Chassis to identify screws that require adjustment.

M. Service Test Point (TP6001)

The detection of the Supply / Takeup Photo Transistors, Cassette Down, Reel Sensor, and Cylinder Lock will be inhibited when TP6001 is grounded on the System Control Section of the Main C.B.A.

Note :

If a Cassette Up Ass'y is removed and TP6001 is grounded, confirmation of Mechanism movement without a Tape is possible.

N. Handling of the Main C.B.A. when Servicing

Do not pull the Main C.B.A. in the direction indicated by the arrow. Do not pull upward while holding the UHF/VHF Tuner/TV Demodulator Unit because you may crack the Main C.B.A.

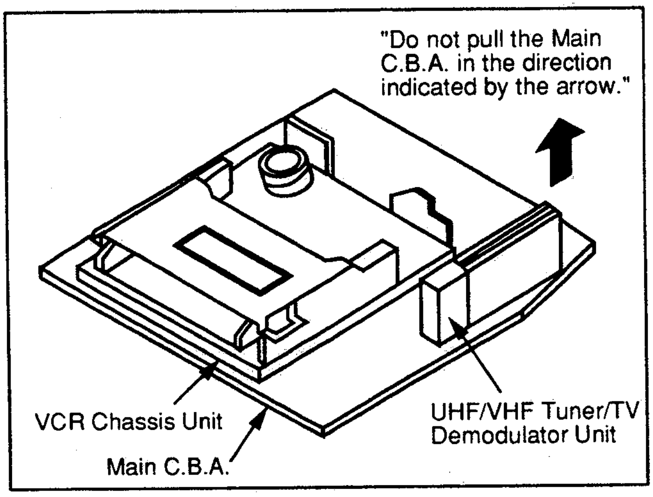

"Do not pull the Main C.B.A. in the direction indicated by the arrow."
VCR Chassis Unit
Main C.B.A.
UHF/VHF Tuner/TV Demodulator Unit

Fig. 13

O. How to remove the Cassette Up Ass'y

1. In the order described in the Disassembly of Cabinet Parts section, remove the Top Cover, Front Panel Unit, and
   Operation I and II C.B.A.s : Model A, B, C, D, F, G, H
   or Timer / Operation I and II C.B.A.s : Model E, I .
2. Remove 2 Screws (S-7) in Fig. D7, Page 2-3.
3. Remove 2 Screws (S-13), 2 Screws (S-14), in Fig. D9, Page 2-3.

P. Worm Wheel Position after Eject Operation

After performing a mechanical alignment, the hole of the Worm Wheel is positioned at the Bottom as shown in Fig. 14. However, when the Eject operation is performed electrically, the position of the hole on the Worm Wheel is slightly shifted from the original adjustment point. This is normal operation. Do not try to readjust the Worm Gear position.

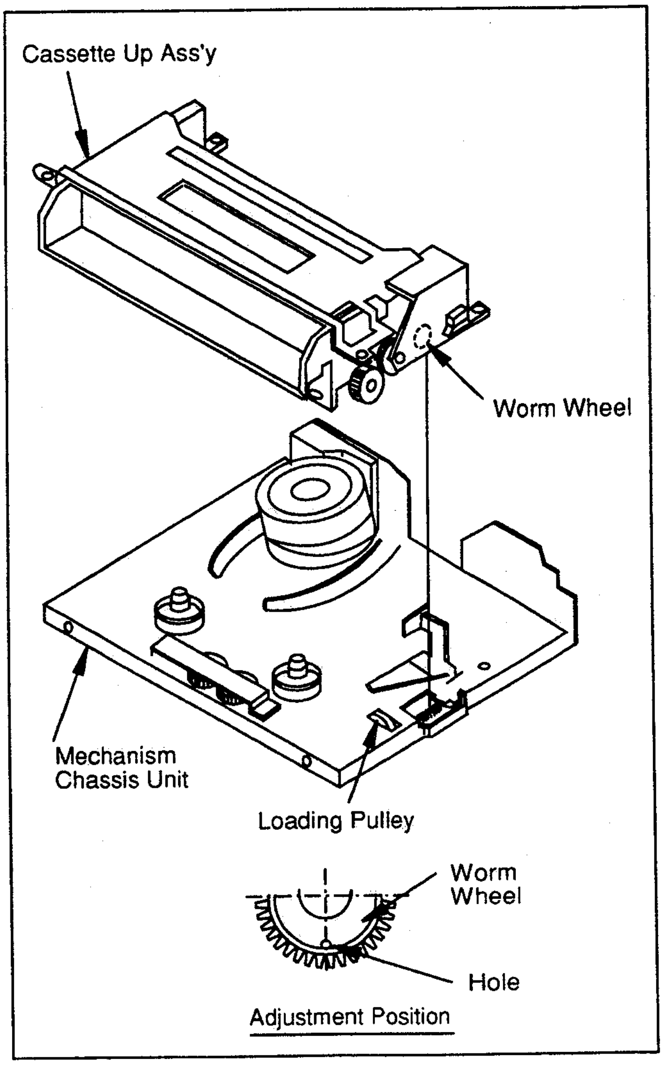

Cassette Up Ass'y
Worm Wheel
Mechanism Chassis Unit
Loading Pulley
Worm Wheel
Hole
Adjustment Position

Fig. 14

Q. Variable Voltage Isolation Transformer

Because a Hot Chassis Ground is present in the Switched Mode Power Supply Circuit, an Isolation Transformer must be used. Also, in order to have the ability to increase the input voltage slowly, when troubleshooting this type of Power Supply Circuit, a variable isolation transformer is required.

R. How to Defeat the Auto Tracking Function

To defeat the Auto Tracking Function, place a jumper between following Test points in STOP mode to maintain the Neutral Position.

Model : A, B, C, D, E

TP3504----TP6009 (+5V)
or
TP6003----TP6009 (+5V)

TP3504 : Head Amp Ass'y
TP6003, TP6009 (Model E) : System Control Section of the Main C.B.A.
TP6009 (Model A, B, C, D) : Video Signal Process Section of the Main C.B.A.

Model : F, G, H, I

TP6003----TP6009 (+5V)

TP6003 : Video Signal Process Section of the Main C.B.A.
TP6009 : System Control Section of the Main C.B.A.

S. Set Tracking to the Neutral Position

Pressing eject and reinserting a Tape will access the Neutral Tracking position.

T. Service of UHF/VHF TUNER/TV DEMODULATOR UNIT

Since the UHF/VHF TUNER/TV DEMODULATOR UNIT has already been pre-adjusted at the factory, do not try to adjust the UHF/VHF TUNER/TV DEMODULATOR UNIT.
The UHF/VHF TUNER/TV DEMODULATOR UNIT replacement part is available as a complete assembly unit only.

U. Supply Unit for IR Wireless Transmitter Unit

The IR Wireless Transmitter Unit replacement part is available as a complete assembly unit only.
Do not try to disassemble the IR Wireless Transmitter Unit. However, the battery cover is available separately as a replacement part.

V. How to Read the Disassembly / Assembly Procedures

(For Cabinet Part)

STEP /LOC. NO.	PART	REMOVAL		
		Fig. No.	REMOVE *UNLOCK/RELEASE/ UNPLUG/UNCLAMP/ UNSOLDER	Note
①	Top Cover	D2	2(S-1), 2(S-2)	----
②	Power Supply Ass'y	D3	(S-3), *P1001	----
			*3(L-1)	1
③	Bottom Panel	D4	(S-4), (S-5), *2(L-2)	2
↑ ①	↑ ③	↑ ⑤	↑ ⑥	

(For Mechanism Part)

STEP /LOC. NO.	START -ING NO.	PART		REMOVAL		INSTALLATION
				Fig. No.	REMOVE *UNHOOK/UNLOCK/ RELEASE/UNPLUG/ UNCLAMP/UNSOLDER	ADJUSTMENT #CONDITION
①	1	PINCH CAM CAP	T	DM1 DM3	*(L-1)	----------------------
②	1	PRESSURE ROLLER ARM UNIT	T	DM1 DM3	<Note 1>	(+) ----------------------
③	1	P5 SECTOR GEAR	T	DM1 DM4	(C-1), <Note 2>	(+) See Alignment Procedure for Mechanism, Item 12-5.
↑ ①	↑ ②	↑ ③	↑ ④	↑ ⑤	↑ ⑥	↑ ⑦

①: Order of steps in Procedure
When reassembling, perform the step(s) in the reverse order.
These numbers are also used as the identification (location) No. of parts in Figures.

②: Starting No. followed by corresponding part which can be removed at this stage. See example below.

Example:
The Pinch Cam Cap can be removed without removing any other parts because the STEP/LOC. No. and the STARTING No. are the same.
But the Pressure Roller Arm Unit can be removed only after removing the Pinch Cam Cap(No.①)

③: Part to be removed or installed.

④: Location of part.
T=Top B=Bottom

⑤: Fig. No. showing Procedure or Part Location.

⑥: Identification of part to be removed, unhooked, unlocked, released, unplugged, unclamped, or unsoldered.
P=Spring W=Washer
C=Cut Washer N=Nut
S=Screw
*=Unhook, unlock, release, unplug, or unsolder
2(S-1)=2 Screws (S-1)

⑦: Adjustment information for installation.
(+): Refer to Exploded Views for Lubrication Information.
= Condition for adjustment.

W. Replacement Procedure for Leadless (Chip) Components

The following procedures are recommended for the replacement of the leadless components used in this unit.

1. Preparation for replacement
   a. Soldering Iron
      Use a pencil-type soldering iron that uses less than 30 watts.
   b. Solder
      Eutectic Solder (Tin 63%, Lead 37%) is recommended.
   c. Soldering time
      Do not apply heat for more than 4 seconds.
   d. Preheating
      Leadless capacitor must be preheated before installation. – (266°F ~ 302°F) (130°C ~150°C) for about two minutes.

   Note:
   a. Leadless components must not be reused after removal.
   b. Excessive mechanical stress and rubbing of the component electrode must be avoided.

2. Removing the leadless component
   Grasp the leadless component body with tweezers and alternately apply heat to both electrodes. When the solder on both electrodes is melted, remove the leadless component with a twisting motion.

   Note:
   a. Do not attempt to lift the component off the board until the component is completely disconnected from the board by a twisting action.
   b. Be careful not to break the copper foil on the printed circuit board.

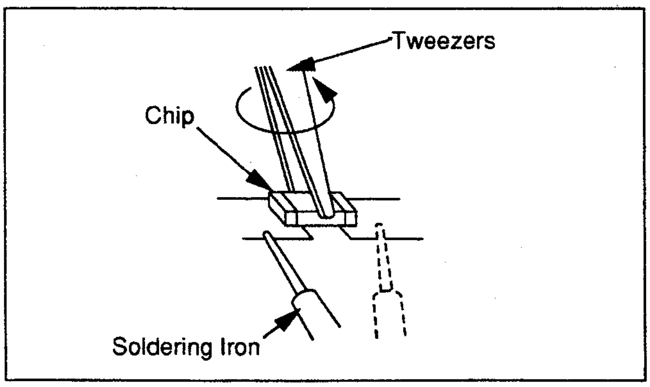


Fig. 15

3. Installing the leadless component
   a. Presolder the contact points on the circuit board.

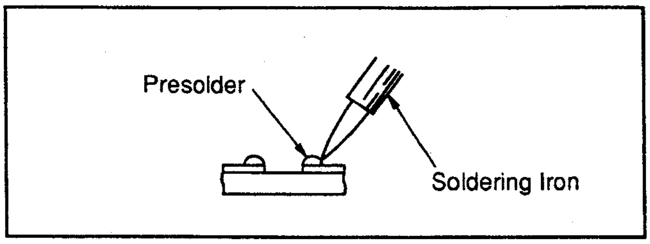


Fig. 16

   b. Press the part downward with tweezers and solder both electrodes as shown below.

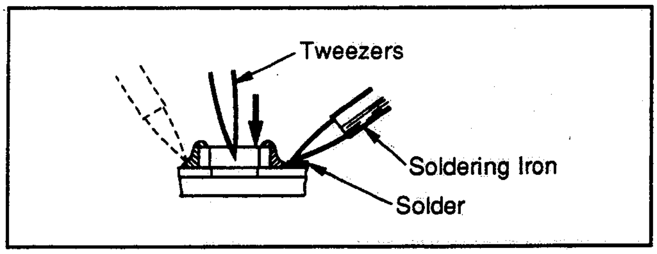


Fig. 17

Note:
Do not glue the replacement leadless component to the circuit board.

X. Special Note

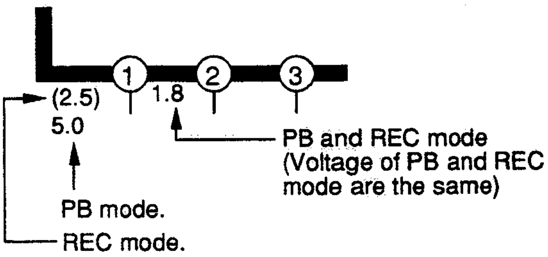
All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "ELECTROSTATICALLY SENSITIVE (ES) DEVICES" section of this service manual.

Y. Voltage Measurement

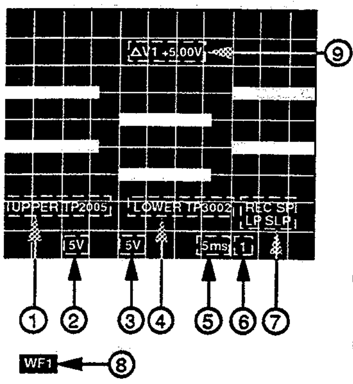
1. Voltage Chart
   a. Color bar signal in SP mode.
   b. ——:Unmeasurable or not necessary to measure.

2. Schematic Diagram
   a. Audio Section
      Monoscope signal in SP REC and PB mode.
   b. Other Sections
      Color bar signal in SP REC and PB mode.

   Note:
   Voltage Indications for the REC and PB modes on the Schematic are as shown below.



Z. How to Read Waveforms


ΔV1 +5.00V
⑨
UPPER TP2005
LOWER TP3002
REC SP
LP SLP
5V
5V
5ms
1
①
②
③
④
⑤
⑥
⑦
WF1
⑧

① Connecting Point
② Volts/Div
③ Volts/Div
④ Connecting Point
⑤ Time/Div
⑥ Trigger Channel of the scope (1:UPPER, 2:LOWER)
⑦ Operation Mode of VCR
⑧ Waveform Point on Schematic
⑨ ΔV1 : Peak to Peak.

AA. Indication for Zener Voltage of Zener Diodes

The Zener Voltage of Zener Diodes are indicated as such on schematic Diagrams.

Example:
(6.2V).....Zener Voltage

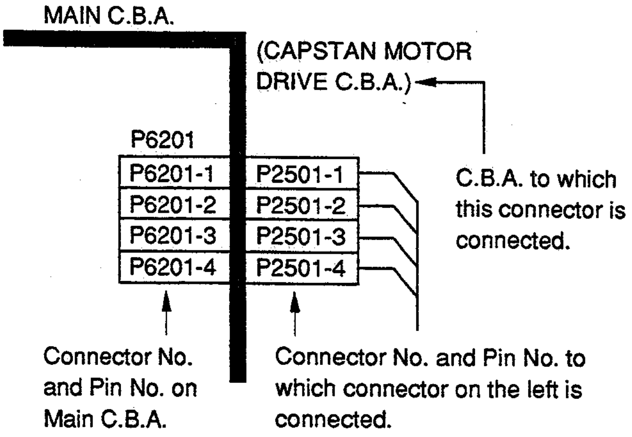
AB. How to Identify Connectors on Schematic Diagrams

Each connector is labeled with a Connector No. and Pin No. indicating what it is connected to, in other words, its counter part.

Connections between large P.C.B.s and small circuit boards are illustrated on the large P.C.B. schematics.

Use the interconnection schematic diagram to find the connections between associated connectors.

Example:
The connections between C.B.A.s are as shown below.

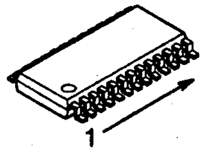

MAIN C.B.A.
(CAPSTAN MOTOR DRIVE C.B.A.)
P6201
P6201-1
P6201-2
P6201-3
P6201-4
P2501-1
P2501-2
P2501-3
P2501-4
C.B.A. to which this connector is connected.
Connector No. and Pin No. on Main C.B.A.
Connector No. and Pin No. to which connector on the left is connected.

Use this cross reference chart to determine the equivalent model used in the Summary, Adjustment Procedures, Schematic Diagrams, Circuit Board Diagrams, Exploded Views and Replacement Parts List.

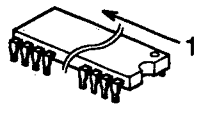
MODEL	MARK
PV-4308	A
PV-4311	B
PV-4311-K	C
PV-4315S	D
PV-4325S	E
PV-4351	F
PV-4351-K	G
PV-4358	H
PV-4355S	I

C. IC AND TRANSISTOR INFORMATION

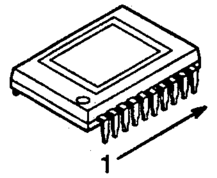
GENERAL C.B.A./ASS'Y PARTS



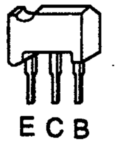
LA7285M, AN1358S,
LC7472NM8790,
M62302FP, CD4053BCM,
TC4W66F, UPC4570G2-T1,
AN3317SB



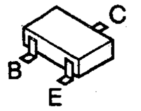
AN3826NK,
D75218CW-026,
T47C212A3322



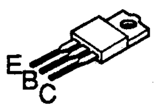
AN3813K



2SD1458,
2SD638

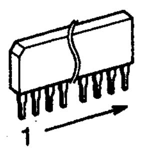


2SD601, 2SC2412KR,
2SB710, 2SC2412KS,
2SA1037KR, 2SB709

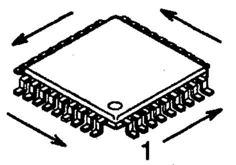


2SC4418LF608,
2SC4662LF608,
2SC4130LF608,
2SC4533LP,
2SC3852, 2SC3870,
2SD1776

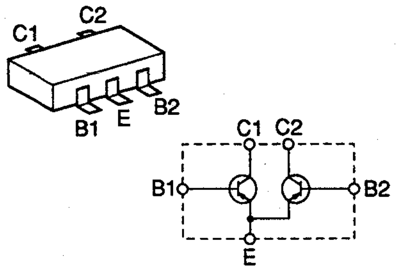
MAIN C.B.A.



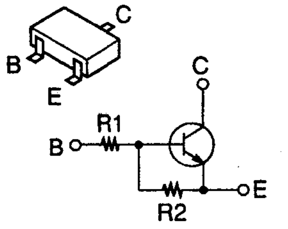
XRA6418N



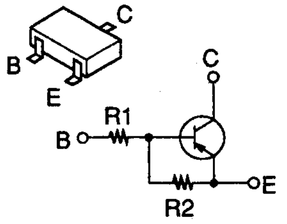
TA8843AFA, MN3858S,
MN6750245V5G,
AN3460FBS, LM833M,
MN6750405V5M,
MN6750325V5X


C1
C2
B1
E
B2
C1 C2
B1
B2
E

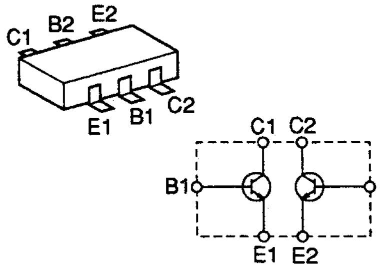
2SA1618


C
B
E
C
R1
B
R2
E

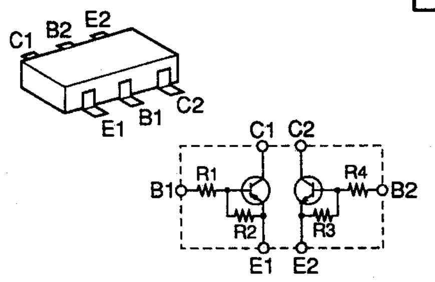
UN2211(R1=10K, R2=10K),
UN2212(R1=22K, R2=22K),
UN2213(R1=47K, R2=47K),
UN2214(R1=10K, R2=47K),
UN2215(R1=10K, R2=OPEN),
DTC144EK(R1=47K, R2=47K)


C
B
E
C
R1
B
R2
E

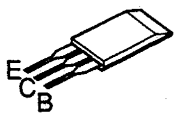
UN211L(R1=4.7K, R2=4.7K),
UN2112(R1=22K, R2=22K),
UN2113(R1=47K, R2=47K),
UN2115(R1=10K, R2=OPEN)


C1
B2
E2
E1
B1
C2
C1 C2
B1
B2
E1 E2

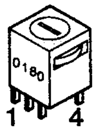
IMX1


C1
B2
E2
E1
B1
C2
C1 C2
R1
R4
B1
B2
R2
R3
E1 E2

RN4601
(R1=4.7K, R2=4.7K, R3=4.7K, R4=4.7K)

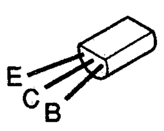


2SD1581,
2SD2159

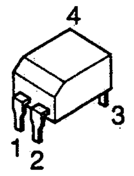


T4101,
EIQ7QF018Q

POWER SUPPLY ASS'Y

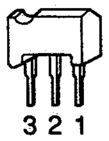


2SC1684,
2SA564

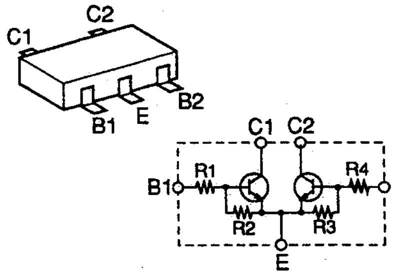


ON3131-R,
ON3161-QR

TIMER / OPERATION I C.B.A.

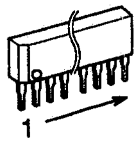


MN1280-L


C1
C2
B1
E
B2
C1 C2
R1
R4
B1
B2
R2
R3
E

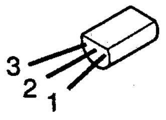
XN1213
(R1=47K, R2=47K, R3=47K, R4=47K)

CAPSTAN MOTOR DRIVE C.B.A.



PUA3228

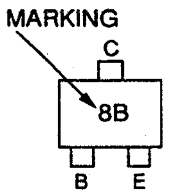
HI-FI AUDIO C.B.A.



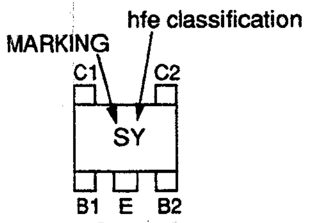
UPC78L05J

HOW TO READ THE IDENTIFICATION MARK OF CHIP TRANSISTORS IN THIS UNIT.

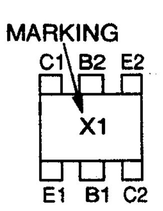
MARKING	PART NO.	MARKING	PART NO.
A	2SB709	6B	UN2112
BR	2SC2412KR	6C	UN2113
BS	2SC2412KS	6E	UN2115
C	2SB710	6Q	UN211L
FR	2SA1037KR	8A	UN2211
SY	2SA1618	8B	UN2212
VA	RN4601	8C	UN2213
X1	IMX1	8D	UN2214
Y	2SD601	8E	UN2215
26	DTC144EK	9L	XN1213


MARKING
C
8B
B E

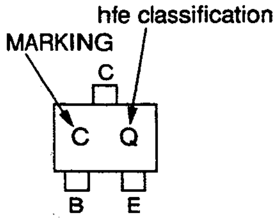
UN2212


hfe classification
MARKING
C1
C2
SY
B1 E B2

2SA1618


MARKING
C1 B2 E2
X1
E1 B1 C2

IMX1


hfe classification
MARKING
C
C Q
B E

2SB710

II. ADJUSTMENT PROCEDURES

A. MECHANICAL ADJUSTMENT PROCEDURES

1. DISASSEMBLY OF CABINET PARTS

1. DISASSEMBLY FLOWCHART

This flowchart indicates the disassembly steps of the cabinet parts and the P.C. Boards in order to gain access to the item(s) to be serviced. When reassembling, perform the step(s) in the reverse order.

Caution : Disconnect AC Plug before disassembly.

Note :
When removing the Front Panel Unit, work with care so as not to break the locking tabs on the panel.

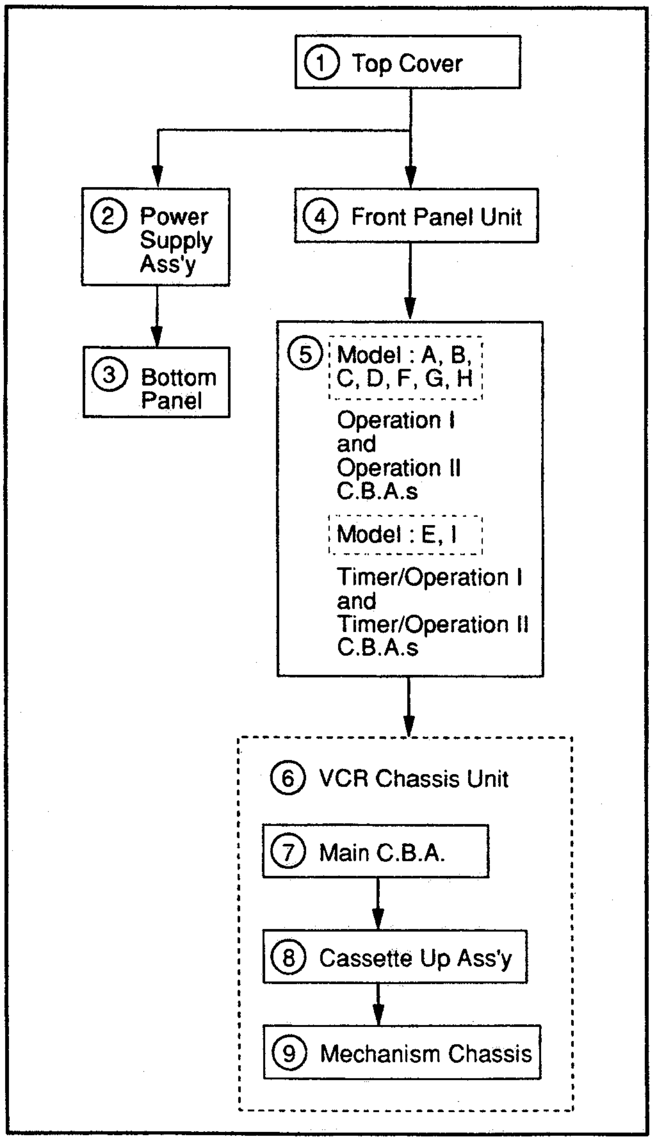

① Top Cover
② Power Supply Ass'y
③ Bottom Panel
④ Front Panel Unit
⑤ Model : A, B, C, D, F, G, H
Operation I and Operation II C.B.A.s
Model : E, I
Timer/Operation I and Timer/Operation II C.B.A.s
⑥ VCR Chassis Unit
⑦ Main C.B.A.
⑧ Cassette Up Ass'y
⑨ Mechanism Chassis

Fig. D1

2. DISASSEMBLY METHOD

STEP /LOC. No.	PART	REMOVAL		
		Fig. No.	REMOVE *UNLOCK/RELEASE/ UNPLUG/UNCLAMP/ UNSOLDER	Note
①	Top Cover	D2	2(S-1), 2(S-2)	----
②	Power Supply Ass'y	D3	(S-3), *P1001	----
			*3(L-1)	1
③	Bottom Panel	D4	(S-4), (S-5), *2(L-2)	2
④	Front Panel Unit	D5	*8(L-3)	3
⑤	Model : A, B, C, D, F, G, H Operation I and Operation II C.B.A.s Model : E, I Timer/ Operation I and Timer/ Operation II C.B.A.s	D6	*7(L-4) *P7501 *P7502---(Model: E, I)	4
⑥	VCR Chassis Unit	D7	2(S-6), 2(S-7), (S-8), (S-9), (S-10), Chassis Plate, 2(S-11), *(L-5)	5
⑦	Main C.B.A.	D8	2(S-12),*P3501, *P2501, *P4101	----
⑧	Cassette Up Ass'y	D9	2(S-13), 2(S-14)	6
⑨	Mechanism Chassis	D9	--------------------------	7

List of Abbreviations :
2(S-1)= 2 Screws (S-1)
(L-1)= Locking Tab (L-1)

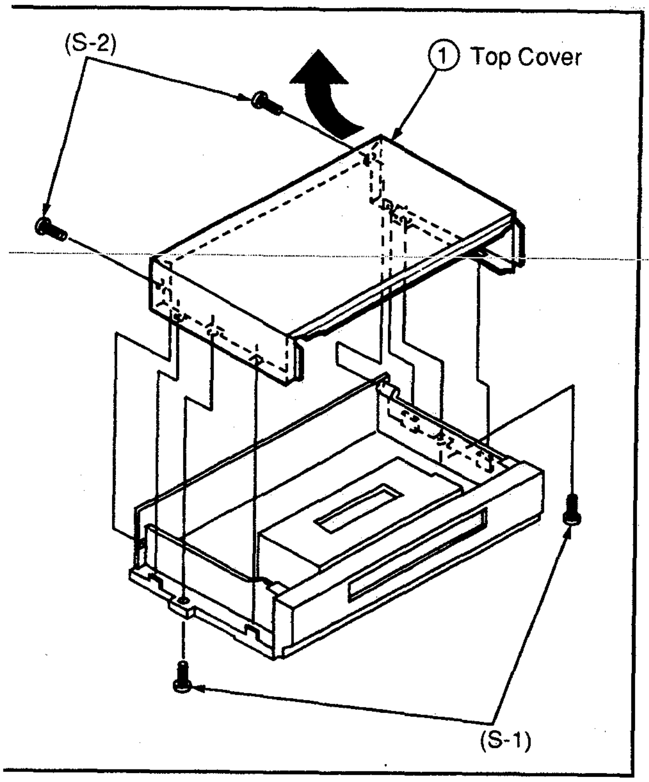

(S-2)
① Top Cover
(S-1)

Fig. D2

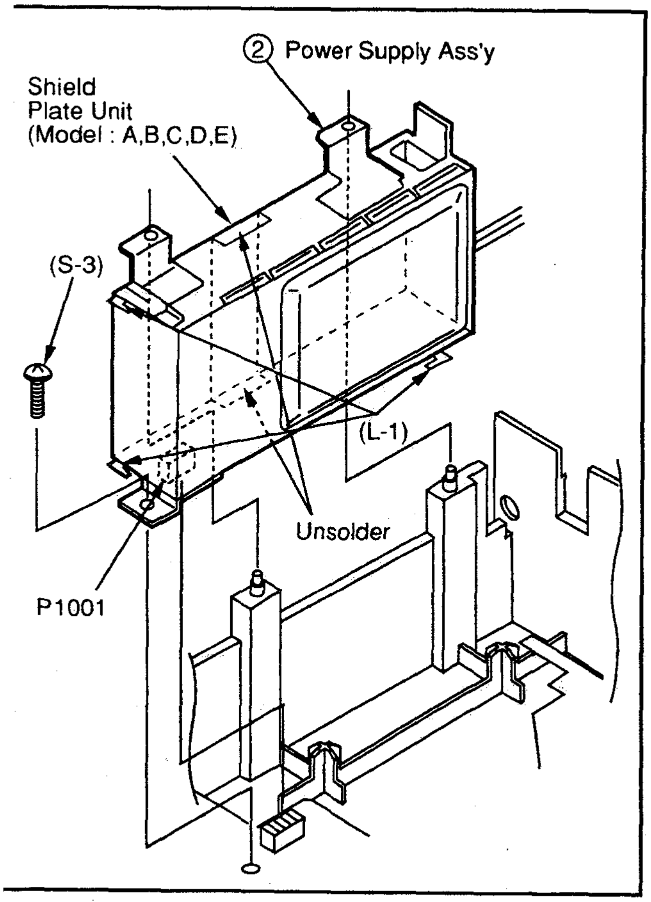

② Power Supply Ass'y
Shield
Plate Unit
(Model : A,B,C,D,E)
(S-3)
(L-1)
Unsolder
P1001

Fig. D3

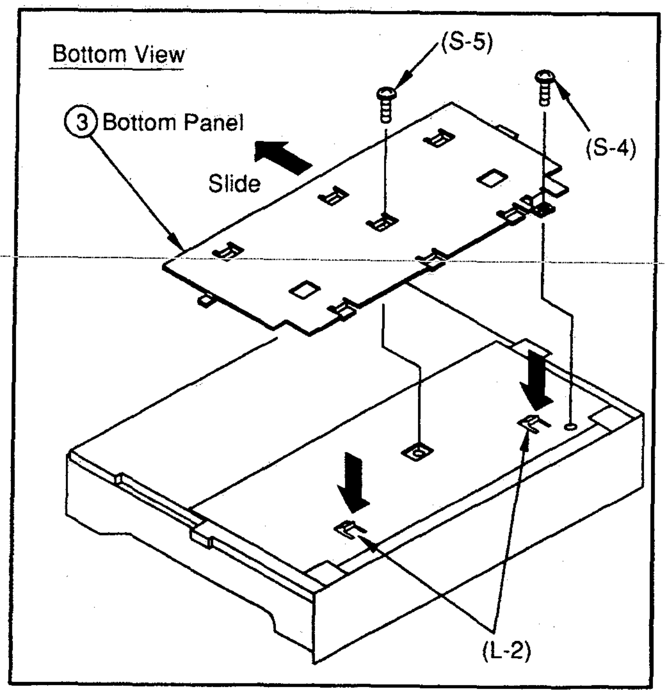

Bottom View
(S-5)
③ Bottom Panel
(S-4)
Slide
(L-2)

Fig. D4

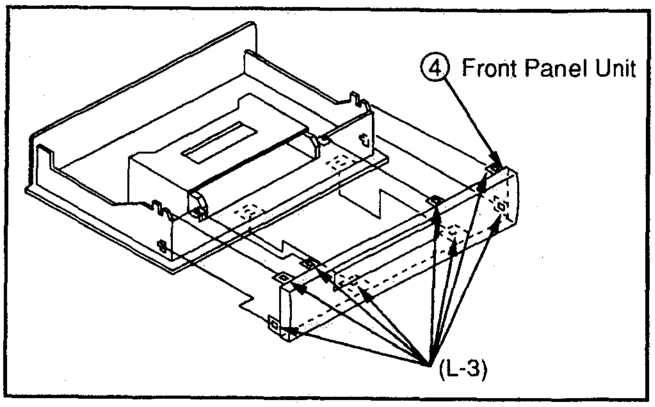

④ Front Panel Unit
(L-3)

Fig. D5

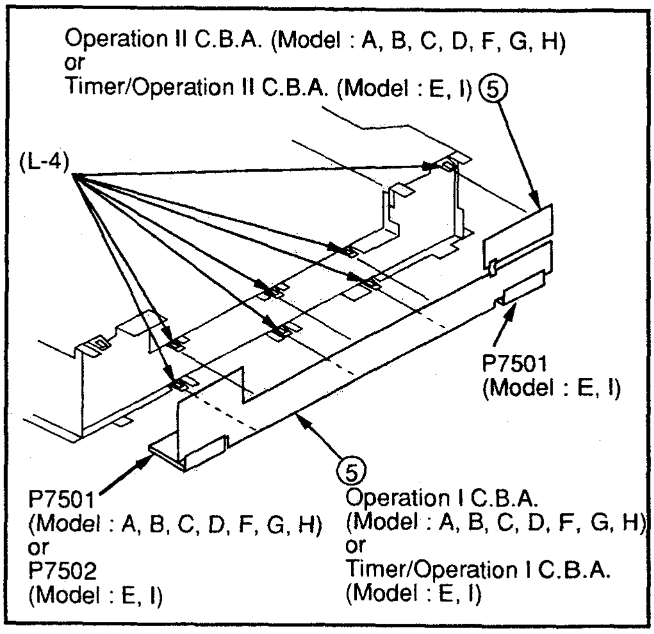

Operation II C.B.A. (Model : A, B, C, D, F, G, H)
or
Timer/Operation II C.B.A. (Model : E, I) ⑤
(L-4)
P7501
(Model : E, I)
⑤
P7501
(Model : A, B, C, D, F, G, H)
or
P7502
(Model : E, I)
Operation I C.B.A.
(Model : A, B, C, D, F, G, H)
or
Timer/Operation I C.B.A.
(Model : E, I)

Fig. D6

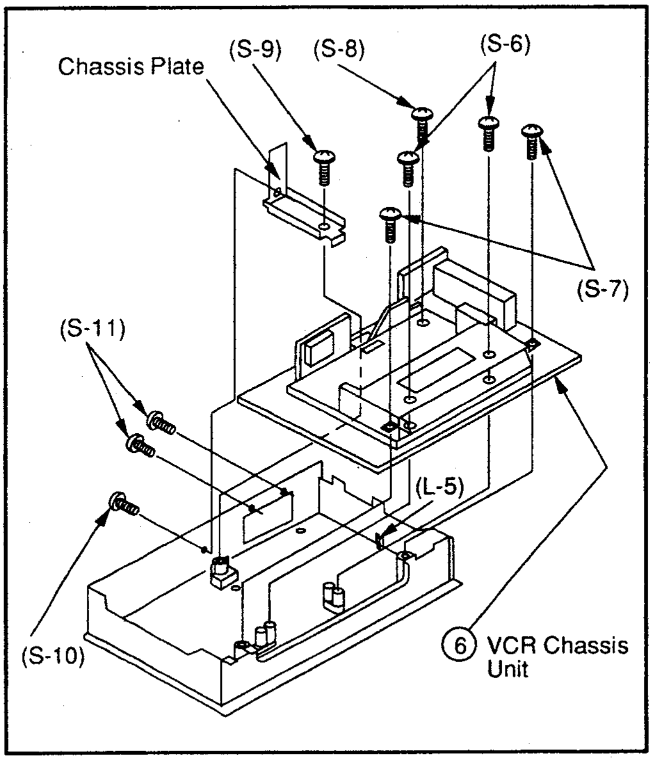

Chassis Plate
(S-9)
(S-8)
(S-6)
(S-7)
(S-11)
(L-5)
(S-10)
⑥ VCR Chassis Unit

Fig. D7

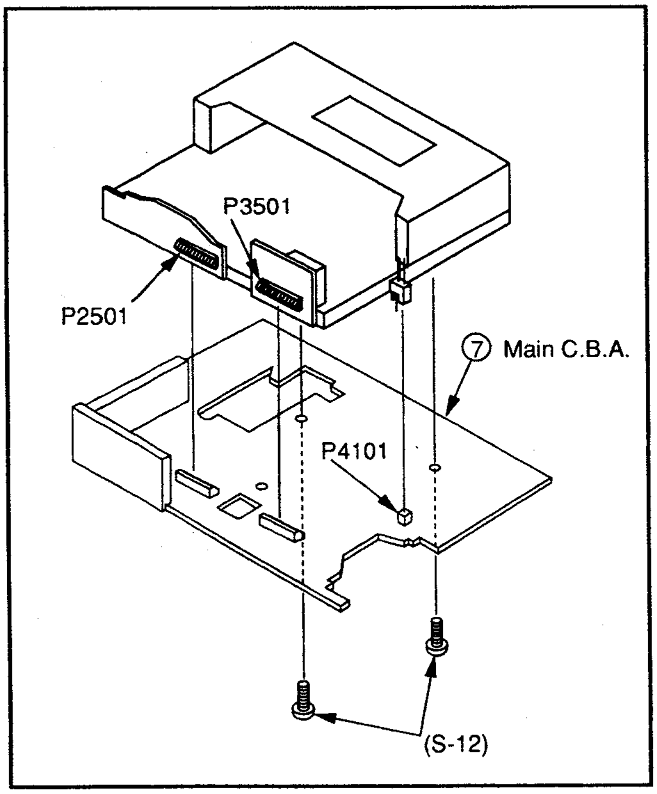

P3501
P2501
⑦ Main C.B.A.
P4101
(S-12)

Fig. D8

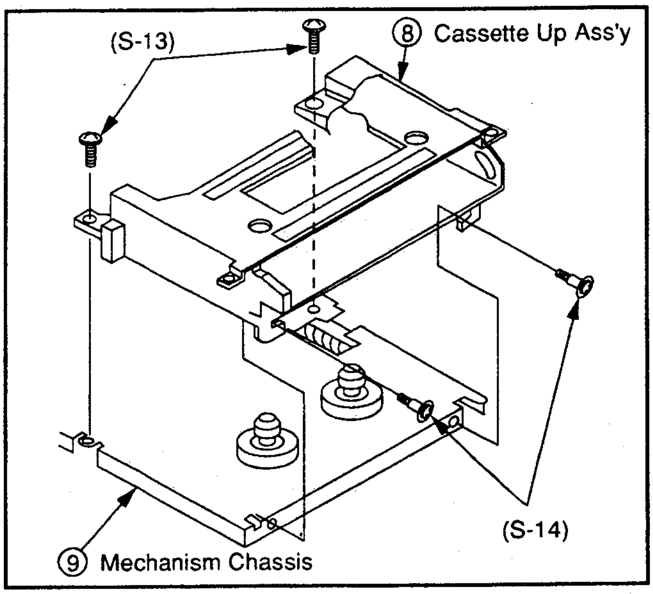

(S-13)
⑧ Cassette Up Ass'y
(S-14)
⑨ Mechanism Chassis

Fig. D9

Reference <Notes> in Table 2:

1. When removing the Shield Case of the Power Supply Ass'y, twist and straighten 3 Locking Tabs (L-1) on the Power Supply Ass'y in Fig. D3. Then remove the Shield Case by pulling it away from the Power Supply Ass'y.

   Model : A, B, C, D, E

   Remove the Shield Plate Unit if necessary.
   When reinstalling the Shield Plate Unit, be sure to solder it.

2. Model : F, G, H, I

   Remove 2 additional screws (S-11) in Fig D7.

3. 1) Release Locking Tabs (L-3) in sequence as follows.
   - [1] Left Side
   - [2] 2 Top Left
   - [3] 2 Top Right
   - [4] Right Side
   - [5] Use screwdriver for 2 Bottom

   2) Work carefully so as not to break the Tabs.

4. Model : E, I

   To remove/install the Timer/Operation I and II C.B.A.s:
   1) Release the locking tabs (L-4).

   Note :
   Do not force the Timer/Operation I C.B.A. down farther than shown in Fig. D10.

   2) While holding the outer sides of the Timer/Operation I C.B.A., pull straight back to disconnect.
   3) Reinstall at same angle as shown in Fig. D10.

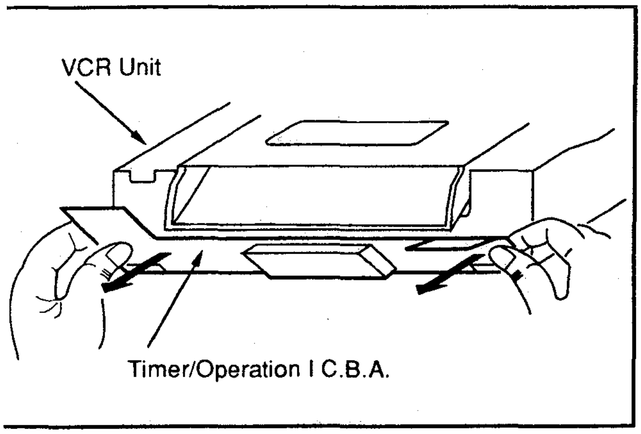

VCR Unit
Timer/Operation I C.B.A.

Fig. D10

1) When removing the VCR Chassis Unit, refer to SERVICE NOTES AND CAUTIONS, Item B-2.
2) Press out on the frame while tightening 2 Screws (S-7) as shown in Fig. D11.

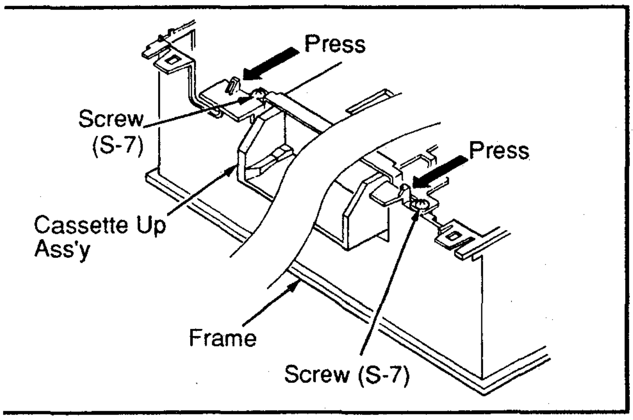

Press
Screw (S-7)
Press
Cassette Up Ass'y
Frame
Screw (S-7)

Fig. D11

When reinstalling the Cassette Up Ass'y, mechanical adjustment (alignment) should be performed for proper operation. Please refer to Adjustment of Cassette Up Ass'y and Chassis.

When reinstalling the Mechanism Chassis to the Main C.B.A., refer to SERVICE NOTES AND CAUTIONS, Item F.

2. PROCEDURE FOR CLEANING UPPER CYLINDER UNIT

1. Position the Video Head to permit access for cleaning. Hold the Upper Cylinder to keep it from turning while cleaning it.
2. Gently rub the Video Heads in the direction of tape travel with a Head Cleaning Stick (VFK27) moistened with Ethanol.
3. Repeat for the other Video Heads.

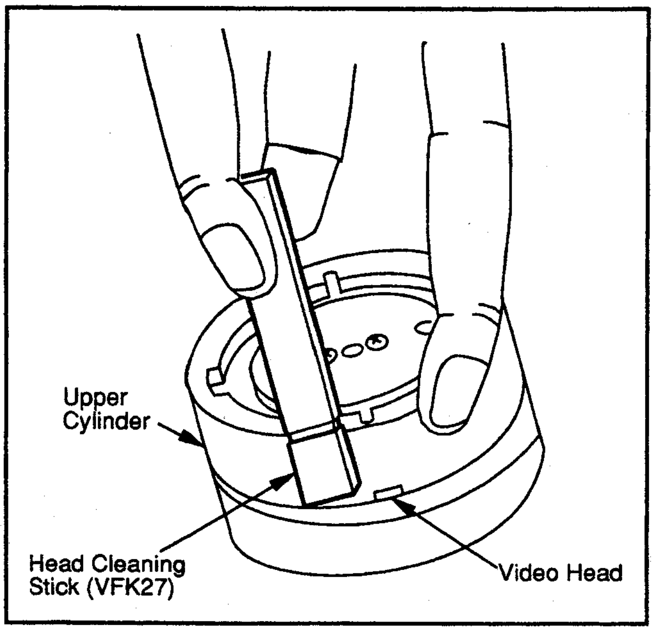

Upper Cylinder
Head Cleaning Stick (VFK27)
Video Head

Fig. M1

Note :

1. Do not rub vertically.
2. Do not apply any pressure to the head.
   If contaminant is not easily removed, continued gentle wiping will usually remove it.
3. Clean the Cylinder surface with Ethanol if fingerprints are present after cleaning the Video Heads.

3. ADJUSTMENT PROCEDURES

1. REPLACEMENT OF UPPER CYLINDER UNIT

1-1. REMOVAL OF UPPER CYLINDER UNIT

Work with extreme care when removing or replacing the Upper Cylinder Unit. Do not touch Video Heads during servicing.

Model : A , B, C, D, E

1. Remove 2 Screws with Washers (A) and gently lift the Upper Cylinder Unit from the shaft.

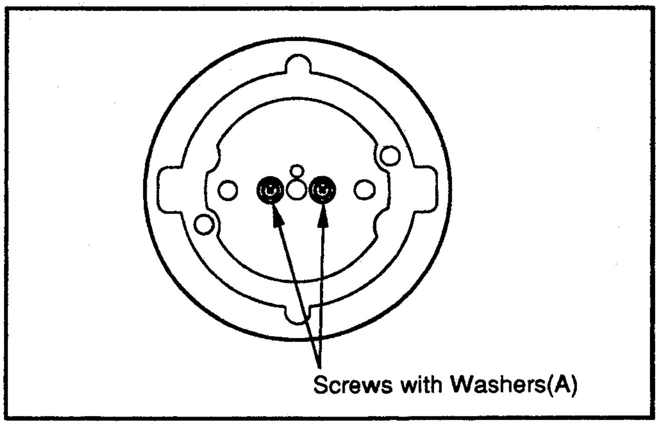

Screws with Washers(A)

Fig. M2-1

Model : F, G, H, I

1. Unsolder only the Lead Pins which are marked by ' ⇈ ' as shown in Fig. M2-2.
2. Remove 2 Screws with Washers (A) and gently lift the Upper Cylinder Unit from the shaft.

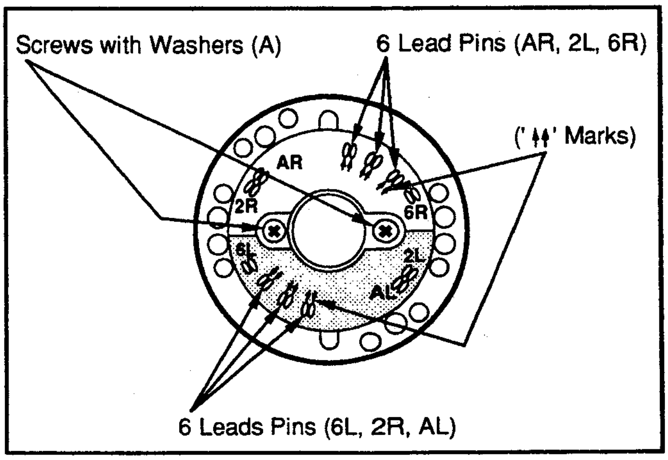

Screws with Washers (A)
6 Lead Pins (AR, 2L, 6R)
(' ⇈' Marks)
AR
2R
6R
6L
2L
AL
6 Leads Pins (6L, 2R, AL)

Fig. M2-2

1-2. CLEANING OF D.D. CYLINDER SHAFT AND THE SURFACE

1. Before reinstalling a new unit, clean the D.D. Cylinder Shaft and the surface that engages with the Upper Cylinder with a soft cloth dampened with Ethanol in Fig. M3.

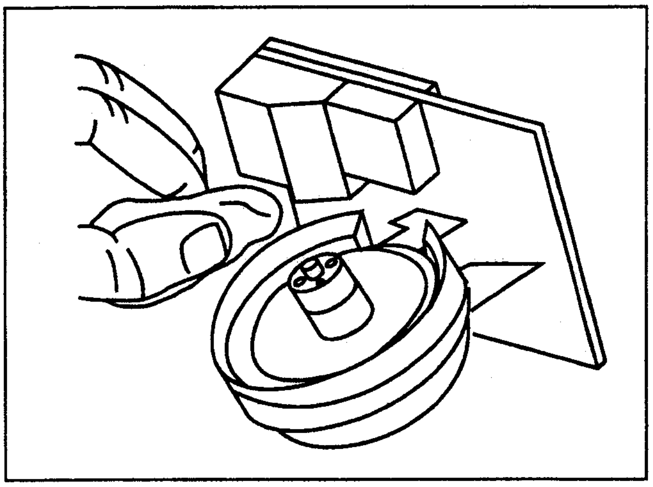


Fig. M3

1-3. REPLACEMENT OF UPPER CYLINDER UNIT

Model : A, B, C, D, E

1. Install the new Upper Cylinder Unit carefully so that the hole in the new Upper Cylinder Unit is properly matched to align the hole on the Upper Cylinder to the center of the indentation on the D.D. Cylinder. For details on the installation position, refer to Fig. M4-1.

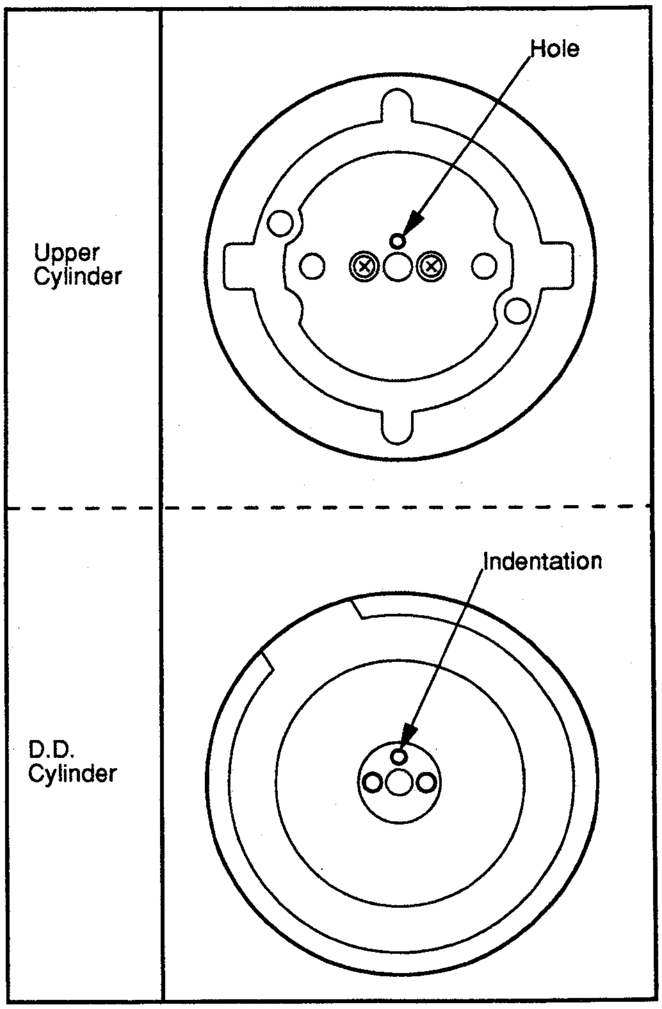


Fig. M4-1

2. Tighten 2 Screws with Washers (A) shown in Fig. M2-1.
3. Clean the Upper Cylinder with a deerskin swab (Head Cleaning Stick) saturated with Ethanol.

Note :
Upon completion of replacement, perform "TAPE INTERCHANGEABILITY ADJUSTMENT", especially "HORIZONTAL POSITION ADJUSTMENT OF A/C HEAD".

Model : F, G, H, I

Install the new Upper Cylinder Unit carefully so that the Lead Pins are properly matched on the Head Relay Board. For details on the installation position, refer to Fig. M4-2.

1. Install the Lead Pins with extreme care so as not to damage them. Install the Upper Cylinder so that the color of the P.C.B. on the Upper Cylinder matches the color mark on the D.D. Cylinder (White - White).

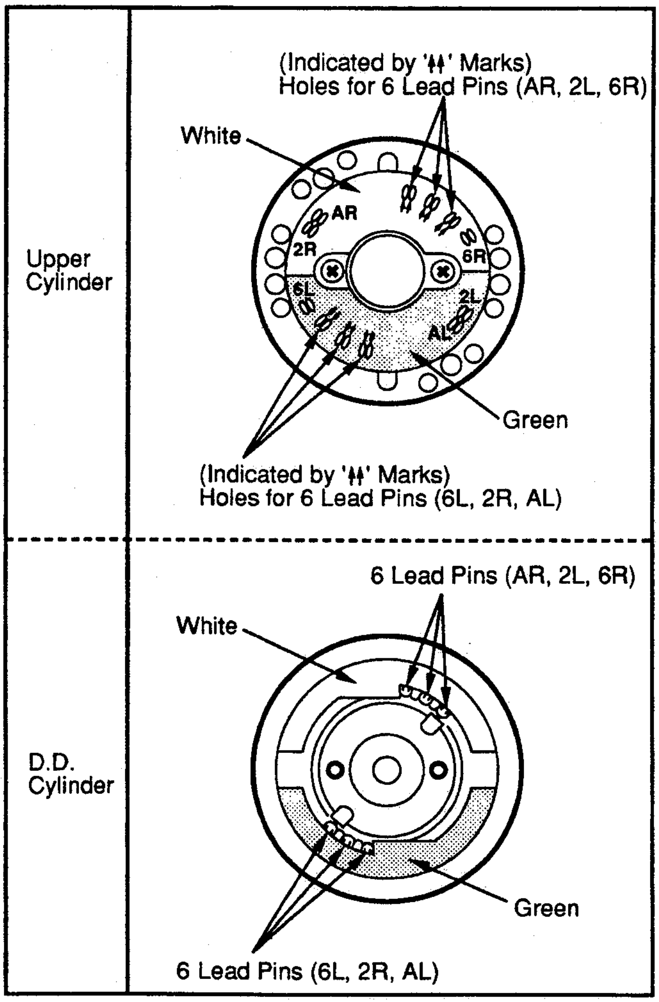

Upper Cylinder
(Indicated by '⫴' Marks)
Holes for 6 Lead Pins (AR, 2L, 6R)
White
AR
2R
6R
6L
2L
AL
Green
(Indicated by '⫴' Marks)
Holes for 6 Lead Pins (6L, 2R, AL)
D.D. Cylinder
6 Lead Pins (AR, 2L, 6R)
White
Green
6 Lead Pins (6L, 2R, AL)

Fig. M4-2

2. Tighten 2 Screws with Washers (A) shown in Fig. M2-2 and resolder the Lead Pins to the Head Relay Board.
3. Clean the Upper Cylinder with a deerskin swab(Head Cleaning Stick) saturated with Ethanol.

Note :
Upon completion of replacement, perform "TAPE INTERCHANGEABILITY ADJUSTMENT", especially "HORIZONTAL POSITION ADJUSTMENT OF A/C HEAD".

2. REPLACEMENT OF D.D. CYLINDER UNIT

Work with extreme care when removing or replacing the D.D. Cylinder Unit. Do not touch Video Heads during servicing.

1. Remove the VCR Chassis Unit.
2. Remove the Main C.B.A.
3. Place the Mechanism Chassis and Cassette Up Ass'y upside down.
4. Remove Black Screw (A) and Earth Plate Unit.
5. Remove 3 Screws (B).
6. Place the Mechanism Chassis and Cassette Up Ass'y in a normal position.
7. Remove 2 Screws (C) and then lift the D.D. Cylinder Unit and Head Amp Ass'y : Model A, B, C, D, E or Hi-Fi Audio / Video Head Amp Ass'y : Model F, G, H, I slowly from top side.

   Note :
   Since there is very little clearance between the D.D. Cylinder Unit and the chassis, remove the D.D. Cylinder Unit gently and carefully.
8. Unsolder P3502 and P3503 on the Head Amp Ass'y : Model A, B, C, D, E or Hi-Fi Audio / Video Head Amp Ass'y : Model F, G, H, I and then remove the Head Amp Ass'y : Model A, B, C, D, E or Hi-Fi Audio / Video Head Amp Ass'y : Model F, G, H, I from the D.D. Cylinder Unit.
9. Place the Mechanism Chassis and the Cassette Up Ass'y upside down.

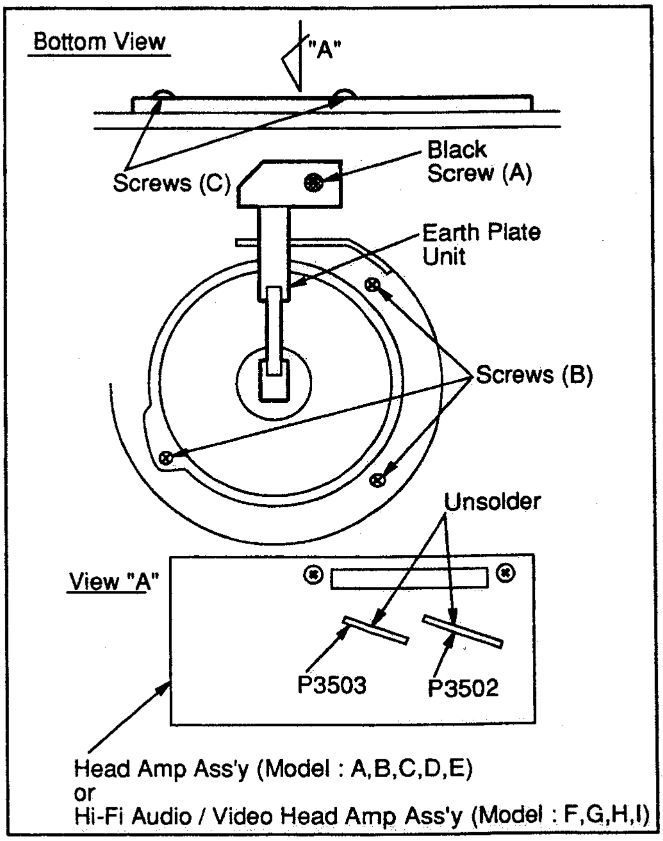

Bottom View
"A"
Screws (C)
Black Screw (A)
Earth Plate Unit
Screws (B)
Unsolder
View "A"
P3503
P3502
Head Amp Ass'y (Model : A,B,C,D,E)
or
Hi-Fi Audio / Video Head Amp Ass'y (Model : F,G,H,I)

Fig. M5-1

10. Reinstall the new D.D. Cylinder Unit on to the chassis by reversing the procedure previously described.

Note :

1. Reinstall the new D.D. Cylinder Unit so that the 2 projections on the Cylinder Base meet the 2 holes on the lower surface of the D.D. Cylinder. Then fit the new D.D. Cylinder Unit to the chassis by turning it (refer to Fig. M5-2). Hold the D.D. Cylinder with extreme care so as not to touch the Heads or the tape path on the Cylinder. If any of these parts are touched, then clean them with a deerskin swab (Head Cleaning Stick) saturated with Ethanol.

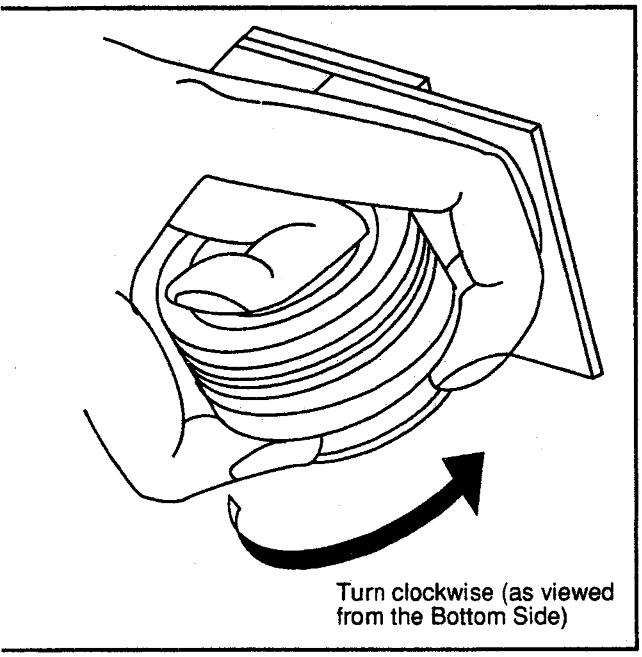

Turn clockwise (as viewed from the Bottom Side)

Fig. M5-2

2. Upon completion of the replacement procedure, be sure that the D.D. Cylinder Unit works. If any further maintenance is required, perform "TAPE INTERCHANGEABILITY" with the alignment tape (VFMS0001H6).
3. Adjustment of the Earth Plate Unit is required after installation. Refer to Item 3 below.

3. CONFIRMATION OF GROUNDING PLATE INSTALLATION POSITION

Purpose :
To optimize the position of the Earth Plate Unit.

Symptom of Misadjustment :
May cause Cylinder rotating buzz.

Remove the Mechanism Unit. Place it upside down. Check to see if the Earth Plate Unit is properly set in a position just less than 1mm (but not more than 1mm), as measured from the center of the plate to the center of the Cylinder Shaft as shown in Fig. M6. If required, adjust the Earth Plate Unit position by loosening Black Screw (A).

Note :
Never install the Earth Plate Unit in the opposite position (on the left side of the center of the Cylinder Shaft), but always within a maximum of 1mm to the right side of the center of this shaft.

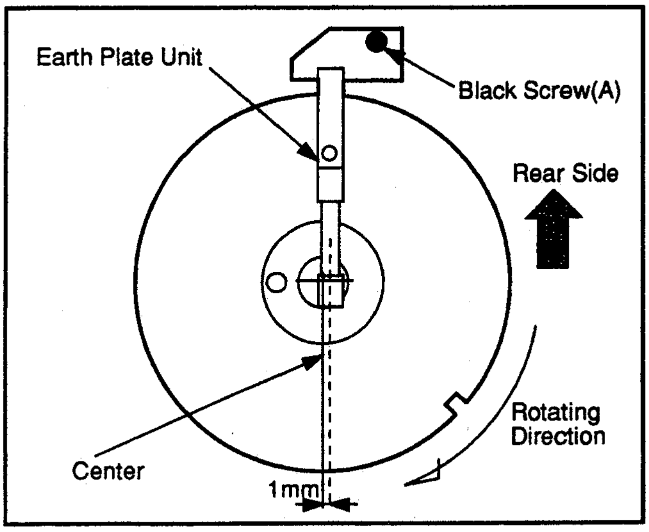


Fig. M6

4. POSITION ADJUSTMENT OF TENSION POST (PRELIMINARY)

Purpose :
To feed a constant tension to the tape so that the tape runs with stability, by performing a preliminary adjustment.

Symptom of Misadjustment :

1) If the adjusted value is below the specification, the tape tension is not sufficient, thus causing a tape slack to occur.
2) If the adjusted value is above the specification, the tape tension is too high, thus causing tape damage to occur.

*Equipment Required :
2mm Hex. Wrench .... (Purchase Locally)

1. Remove the Cassette Up Ass'y.
2. Place a jumper between TP6001 and GND.
3. Turn ON the Power Switch and press the Play Button to complete the loading operation sequence.
4. As soon as loading is completed, insert the Hex. Wrench(2mm) into the Tension Band Fastener and adjust it (only counterclockwise) as indicated by the arrow so that the outside edge of the Tension Post lines up with the outside of the P1 post. (See Fig. M7)
5. Remove the Hex. Wrench (2mm).
6. Press the Stop/Eject Button to complete the unloading operation Sequence.
7. Remove the jumper between TP6001 and GND.
8. Reinstall the Cassette Up Ass'y and cabinet parts.

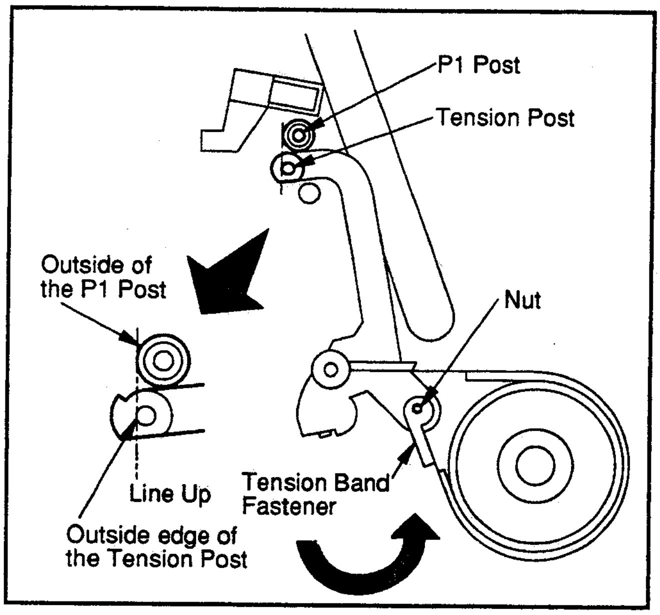


Fig. M7

5. MEASUREMENT AND ADJUSTMENT OF BACK TENSION

Purpose :
To fine adjust the Back Tension so that the tape runs smoothly with a constant tension.

Symptom of Misadjustment :
1) If the tape tension is less than the specified value, the tape cannot come into proper contact with the Video Heads, resulting in poor picture playback.
2) If the tape tension is too high, the tape will soon be damaged.

A : Measurement Procedure

*Equipment Required :
Back Tension Meter (Made in U.S.A., Purchase Locally)
VHS Cassette Tape (120-Minute Tape)

*Specification .... 20 ~ 25g

1. Remove the Top Cover.
2. Play back a T120 cassette tape from its beginning for approx. 10 to 20 seconds, until the tape's movement has stabilized.
3. Insert a Tension Meter into tape path and confirm the reading.
4. If the reading is out of specification, do the adjustment procedure.

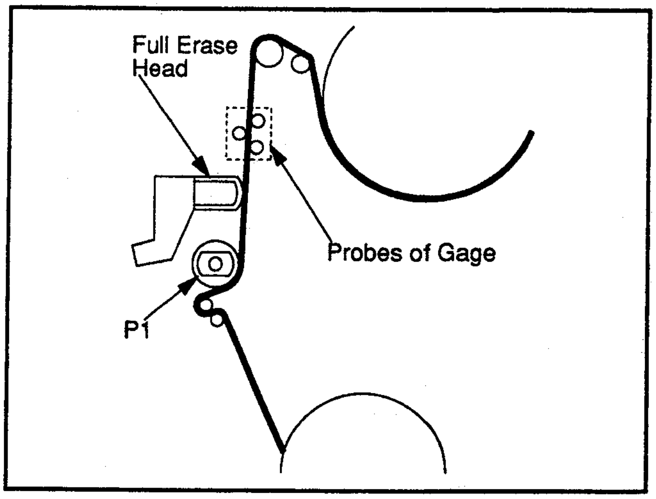


Fig. M8

Note :
1. Be sure that the three probes of the meter are all in solid contact with the tape, but out of contact with any other parts while measuring.
2. It is recommended that measurements be taken three times because the tension meter is very sensitive to external vibrations.

B : Adjustment Procedure

1. Remove the Cassette Up Ass'y. Then re-position the Tension Spring on the Tension Arm Base Teeth in either direction as indicated by the arrow to obtain the specified tension. (See Fig. M9).
2. Re-position the Tension Spring toward the front to increase tension, or toward the rear to decrease tension.
3. Reinstall the Cassette Up Ass'y and verify tension with the meter once again.
4. Reinstall the Top Cover.

Note :
If the specified tension is not obtained even if the Tension Spring is re-positioned, replace the Tension Spring, replace the Tension Band, clean the Reel Table, or be sure there is no dust between the Tension Band and the Reel Table.

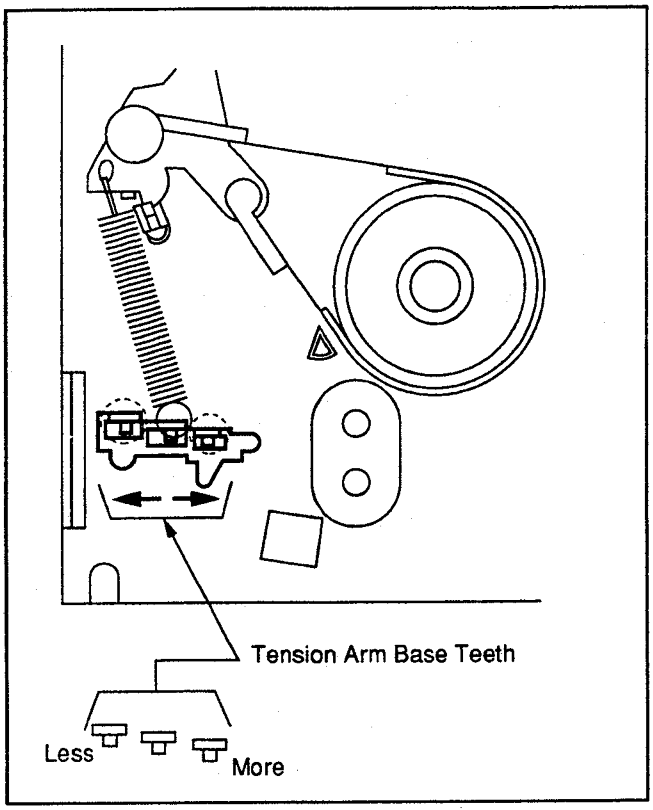


Fig. M9

6. HEIGHT ADJUSTMENT OF REEL TABLES

Purpose :
To properly align the height of the tape wound on the Supply and Take-Up Reels.

Symptom of Misadjustment :
If the height of the tape is not properly aligned, the tape will eventually be damaged.

* Equipment Required :

Post Adjustment Plate	(VFKS0010)
Reel Table Height Fixture	(VFKS0009)

* Specification .... 0 ± 0.1mm

1. Remove the Cassette Up Ass'y.
2. Place the Post Adjustment Plate over the reels, and put the fixture on it. Set the fixture to zero ("0") and ensure that the foot of the fixture touches the cut-out portion of the plate.

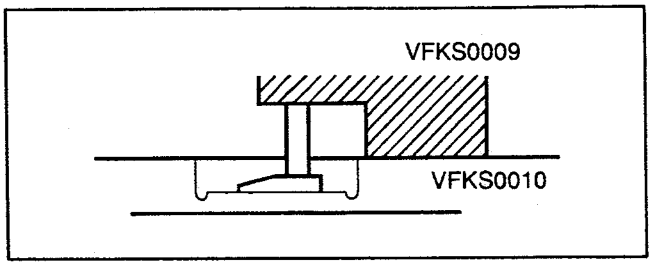


Fig. M10-1

3. Then measure the top portion of the Reel Table and compare the difference against the result of the measurement taken in the above step. Do the same for the other reel table.

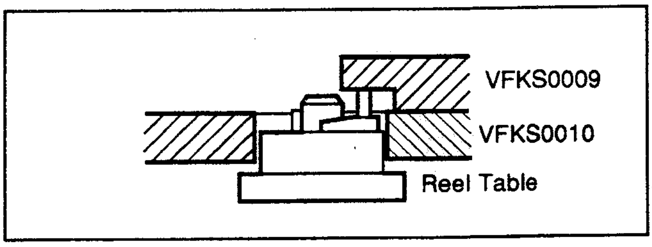


Fig. M10-2

4. If the difference is more than 0.1mm (higher or lower), adjust the height of the reel table to obtain the specified height.
5. For adjustment, change the poly washer located under the reel table. (The washer is available in only one size of 0.13mm thick.) Move the locking tab to remove the reel table.
6. Reinstall the Cassette Up Ass'y and the cabinet parts.

7. HEIGHT ADJUSTMENT OF TAPE GUIDE POSTS (PRELIMINARY ADJUSTMENT)

*Equipment Required :

Lock Screw Wrench	(VFKS0032)
Post Adjustment Plate	(VFKS0010)
Reel Table Height Fixture	(VFKS0009)
Post Adjustment Screwdriver	(VFK0329)

7-A. HEIGHT ADJUSTMENT OF P2 AND P3

Purpose :
To properly align the position of the tape with the Cylinder Lead so that the tape runs with stability.

Symptom of Misadjustment :
1) Since the Envelope Waveform Signal cannot be tracked properly, the Playback picture will be poor.
2) Since the tape does not run smoothly, the tape will eventually be damaged.
3) Tape interchangeability is poor.

1. Remove the Cassette Up Ass'y.
Then install the Post Adjustment Plate.

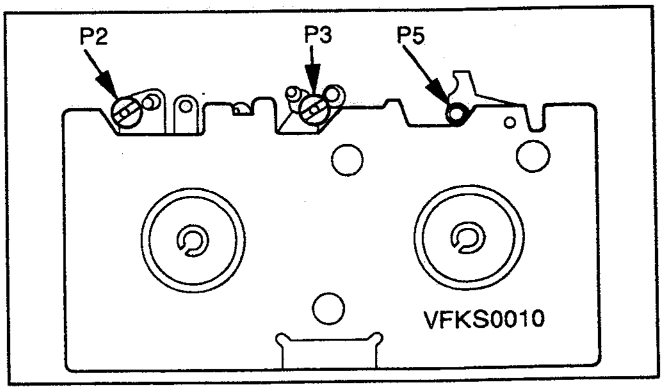


Fig. M11-1

2. First, lower all posts to match the height condition as shown in Fig. M11-2.

> The upper edge of the lower tape guide on each post should be below the bottom of the foot. Loosen Black Lock Screws located at the lower portion of the posts (P2 & P3) using Lock Screw Wrench, then turn the posts with a Post Adjustment Screwdriver.

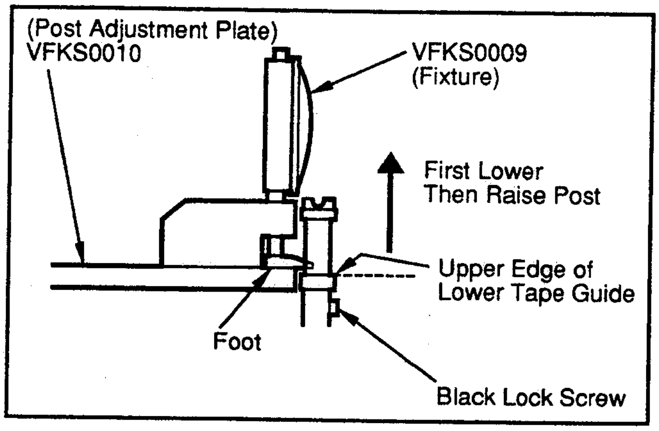


Fig. M11-2

3. Place the fixture on the Post Adjustment Plate and fit the foot to the Adjustment Plate as shown in Fig. M11-2.
(The foot of the fixture should be fully lowered until it touches the plate.)
4. Set the fixture to zero ("0") and slowly raise the post until it just touches the foot.
When the foot touches the post, it should fit as shown in Fig. M11-3 (b). For adjustment of P2 and P3, use a Post Adjustment Screwdriver.

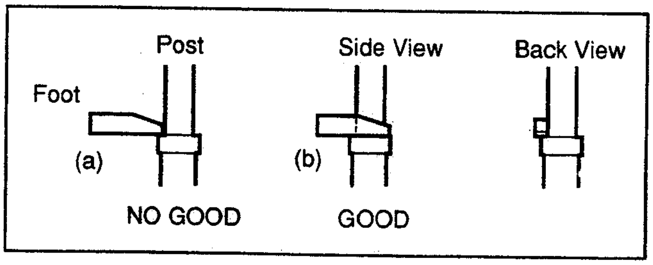


Fig. M11-3

Note:
Upon completion of adjustment, tighten the Black Lock Screws on P2 and P3 using the Lock Screw Wrench.

7-B. HEIGHT ADJUSTMENT OF P5 ARM UNIT

Purpose :
To properly align the Phase and Speed Controls during the CUE/REVIEW Modes and perform the CUE/REVIEW operations without any small additional noise in the picture.

Symptom of Misadjustment :
1) Noticeable noise appears in the picture.
2) The tape will eventually be damaged.

*Equipment Required :
Post Adjustment Plate .... (VFKS0010)
Reel Table Height Fixture .... (VFKS0009)
Nut Driver (5.5mm) .... Purchase Locally

*Specification .... 0 (+0, -0.08) mm

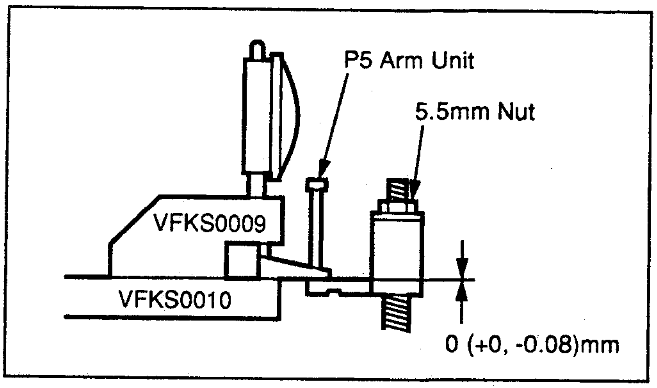


Fig. M11-4

1. Place the Post Adjustment Plate over the Reels, and put the Fixture on it. Set the Fixture to zero ("0") when the foot just touches the Post Adjustment Plate.
2. Slightly raise the P5 post above the plate by turning the 5.5mm Nut counterclockwise. Place the foot on the post as shown in Fig. M11-4.
3. Then slowly turn the 5.5mm Nut clockwise until the fixture reads the specified height.
4. Remove the Post Adjustment Plate. Reinstall the Cassette Up Ass'y and the cabinet parts.

Note:
Upon completion of the above procedure, play back the tape and confirm that the tape runs properly without curling between the lower and upper limits of the P5 Post. Also confirm that the tape is running smoothly.
If adjustment is required, slightly turn the 5.5mm Nut until the curling smooths out.

8. TAPE INTERCHANGEABILITY ADJUSTMENT (FINAL ADJUSTMENT)

Note :
To perform these adjustment/confirmation procedures, set Tracking to the Neutral position.

*Equipment Required :
Dual Trace Oscilloscope
VHS Alignment Tape .... (VFMS0001H6)
Post Adjustment Screwdriver .... (VFK0329)
H-Position Adjustment Screwdriver .... (VFKS0080)
Lock Screw Wrench .... (VFKS0032)

8-A. CONFIRMATION OF TAPE TRAVEL

Purpose :
To be sure that the tape runs is smoothly.

Symptom of Misadjustment :
If the tape travels with instability, the tape will be damaged.

1. Play back a T120 cassette tape and confirm that the tape travels without curling at the upper and lower guides on posts P2 and P3.

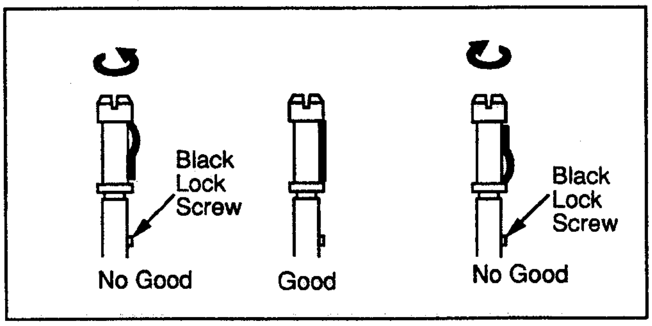


Fig. M12

2. If curling is apparent, adjust the height of the posts by turning the top of the post with the Post Adjustment Screwdriver (for P2 & P3).

   Note:
   Before turning P2 and P3, slightly loosen the Black Lock Screw using the Lock Screw Wrench.

8-B. CONFIRMATION OF A/C HEAD HEIGHT

The height of the A/C Head replacement part assembly has already been adjusted at the factory.

Purpose :
To be sure the tape runs properly along the Control Head.

Symptom of Misadjustment :
If the control signal is not properly picked up, Servo Operation cannot be achieved. A Blue screen will be seen in Playback.

This confirmation is required when the A/C Head is replaced and for a preliminary height adjustment. For final adjustments, do Items 8-C and 8-D.

1. Looking at the lower edge of the Control Head with the T120 tape in motion, ensure that the lower edge of the tape runs 0.25mm above the lower edge of the control head. If it doesn't, turn Black Screws (A), (B), and (C) slightly in either direction as necessary to correct it. Turn clockwise to lower the head and counterclockwise to raise it. When turning Screws (A), (B), and (C), they must each be turned the same amount.

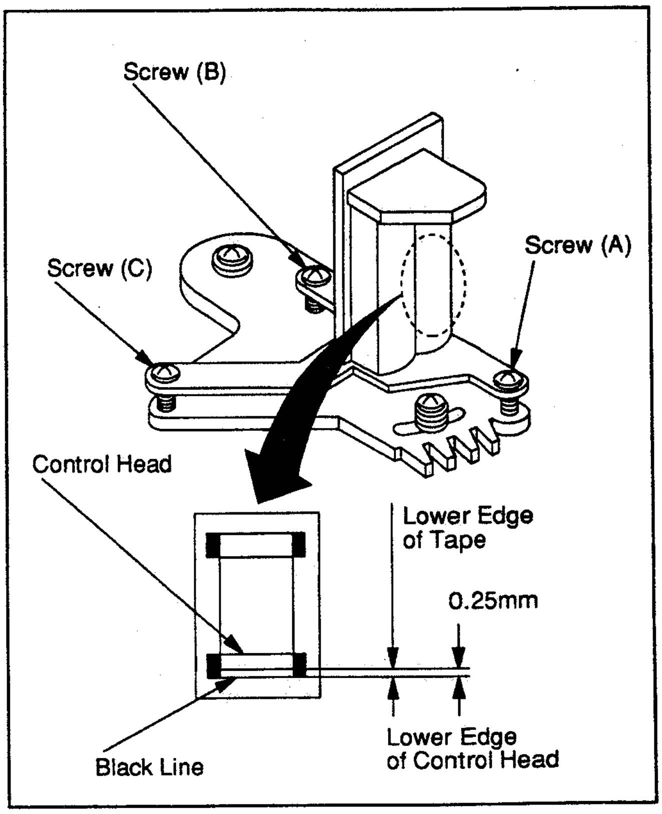


Fig. M13

8-C. CONFIRMATION OF TILT OF A/C HEAD

Purpose :
To confirm that the tape runs is smoothly. In particular, confirm that the tape properly picks up the Audio Signal at the upper part of the head and the Control Signal at the lower part of the head.

Symptom of Misadjustment :
If the tilt of the A/C Head is poorly adjusted, the tape will eventually be damaged. An intermittent Blue screen may be seen in Playback.

1. Play back a T120 Cassette tape and confirm that the tape runs properly between the lower and upper limits of the P4 post. Also confirm that the tape runs smoothly.
2. If adjustment is required, turn Black Screw (B), shown in Fig. M13, clockwise until curling is apparent at the lower edge of P4. Then turn Black Screw (B) counterclockwise until the curling smooths out.

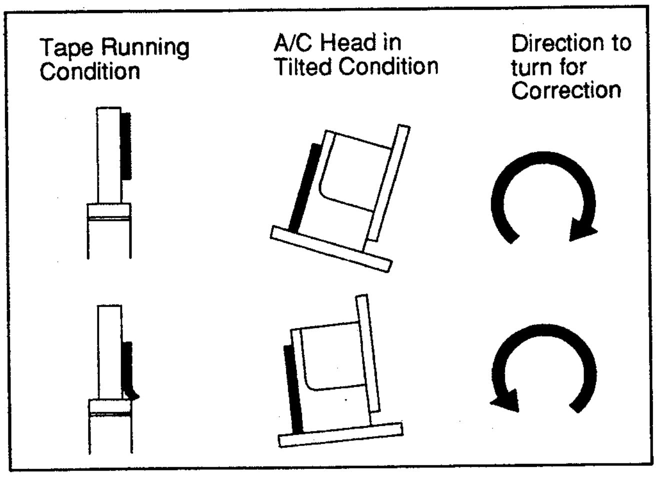

Tape Running Condition
A/C Head in Tilted Condition
Direction to turn for Correction

Fig. M14

8-D. AZIMUTH ADJUSTMENT OF A/C HEAD

Purpose :
To adjust the position and height of the A/C Head so that it meets the tape tracks properly.

Symptom of Misadjustment :
If the position of the A/C Head is not properly adjusted, the Audio S/N Ratio is poor.

1. Connect the oscilloscope to the audio output jack on the rear side of the deck.
2. Play back the monoscope portion (6KHz, Mono) of the alignment tape (VFMS0001H6).
3. Adjust Black Screw (C) on the head base, shown in Fig. M13, so that the output level is at maximum.

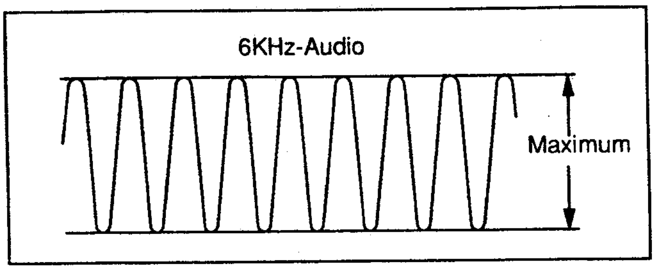


Fig. M15

4. Readjust Black Screw (A), shown in Fig. M13, for maximum output.
5. Disconnect the oscilloscope.

8-E. HORIZONTAL POSITION ADJUSTMENT OF A/C HEAD

Purpose :
To adjust the Horizontal Position of the A/C Head.

Symptom of Misadjustment :
If the Horizontal Position of the A/C Head is not properly adjusted, a maximum envelope cannot be obtained at the Neutral Position of the Tracking Control Circuit.

Model : A, B, C, D, E

Place a jumper between TP3504 on the Head Amp Ass'y and +5V(TP6009) on the System Control Section of the Main C.B.A. to defeat Auto Tracking.

Model : F, G, H, I

Place a jumper between TP6003 on the Video Signal Process Section of the Main C.B.A. and +5V(TP6009) on the System Control Section of the Main C.B.A. to defeat Auto Tracking.

1. Eject the tape and insert it again, to access the Neutral Tracking position. Connect the oscilloscope to TP3002 on the Video Signal Process Section of the Main C.B.A. Use TP6205 as a trigger.
2. Play back the monoscope portion of the alignment tape (VFMS0001H6) and confirm that the RF envelope appears, as in Fig. M17-1.
3. If adjustment is required, loosen the Black Screw with 2 Washers (D) and tighten the Screw lightly. Set the H-Position ADJ. Screwdriver into the Hole (E) shown in Fig. M16. Then slowly turn the fixture either clockwise or counterclockwise so that the envelope is at maximum.
4. Before finding the center of the maximum period of the envelope, rotate the fixture back and forth slightly to confirm the limits on either side of the maximum period.
5. Push the Tracking Control Up Button (on the IR Transmitter) several times (count the number of times pushed) until the maximum envelope is reduced to 1/2.
6. Reset the tracking to the neutral position by ejecting the tape and reinserting it. Push the Tracking control DOWN Button (on the IR Transmitter) several times (count the number of ties pushed) until the maximum envelope is reduced to 1/2.
7. If the number of pushes is not the same, then loosen the Black Screw with 2 Washers (D) and set the H-Position ADJ. Screwdriver into the Hole (E) shown in Fig. M16. Then find the center point. Then repeat the above procedure to determine the center point.
8. Tighten the Black Screw with 2 Washers (D).
9. Model : A, B, C, D, E

   Remove the Jumper between TP3504 and +5V(TP6009).

   Model : F, G, H, I

   Remove the Jumper betweenTP6003 and +5V(TP6009).

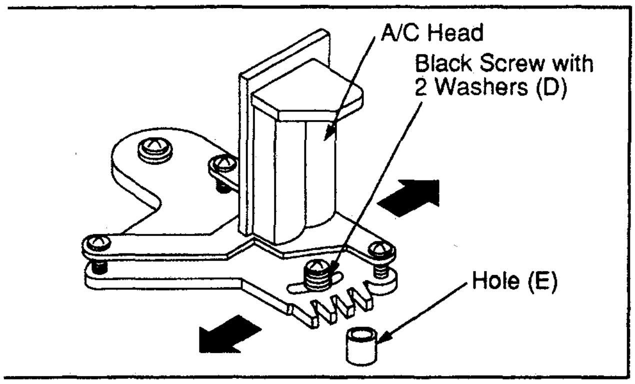

A/C Head
Black Screw with 2 Washers (D)
Hole (E)

Fig. M16

8-F. CONFIRMATION/ADJUSTMENT OF ENVELOPE OUTPUT

urpose :
To achieve a satisfactory picture and secure precise tracking.

ymptom of Misadjustment :
If the envelope is output poorly, much noise will appear in the picture. Then the tracking will lose precision and the playback picture will be distorted by any slight variation of the tracking control circuit.

Model : A, B, C, D, E

lace a jumper between TP3504 on the Head Amp Ass'y and 5V(TP6009) on the System Control Section of the Main .B.A. to defeat Auto Tracking.

Model : F, G, H, I

lace a jumper between TP6003 on the Video Signal rocess Section of the Main C.B.A. and +5V(TP6009) on the ystem Control Section of the Main C.B.A. to defeat Auto racking.

. Eject the tape and insert it again, to access the Neutral Tracking position. Connect the oscilloscope to TP3002 on the Video Signal Process Section of the Main C.B.A. Use TP6205 as a trigger.

. Play back the monoscope portion of the alignment tape (VFMS0001H6). Adjust the height of posts P2 and P3 while watching the scope display so you can make the envelope as flat as possible.
(V1/V-max ≥ 0.7, V2/V-max ≥ 0.8)

f adjustment is required, turn the top of the post with a Post djustment Screwdriver. For adjustment of P2 and P3, refer to tem 8-A and its Note.

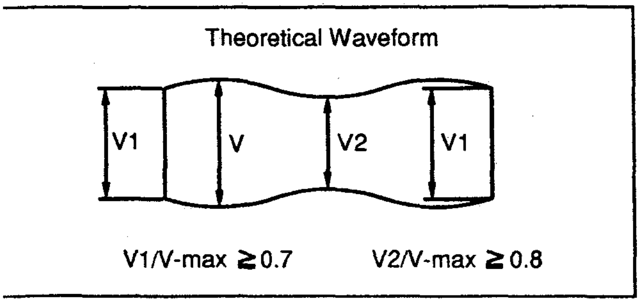

Theoretical Waveform
V1
V
V2
V1
V1/V-max ≥0.7
V2/V-max ≥0.8

Fig. M17-1

3. When the scope display is as shown in Fig. M17-2, adjust the height of P2 so that the waveform looks like the one shown in Fig. M17-4.

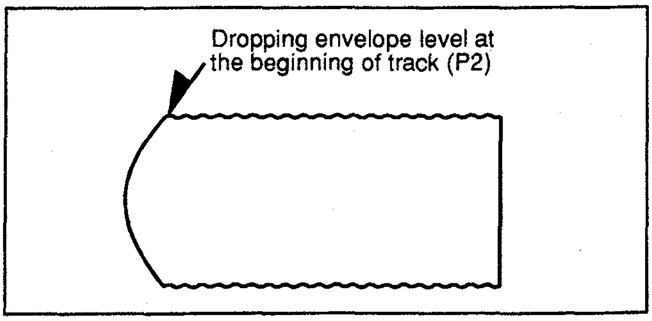

Dropping envelope level at the beginning of track (P2)

Fig. M17-2

4. When the scope display is as shown in Fig. M17-3, adjust the height of P3 so that the waveform looks like the one shown in Fig. M17-4.

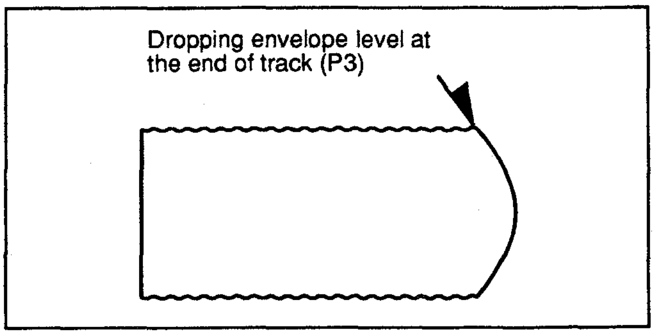

Dropping envelope level at the end of track (P3)

Fig. M17-3

5. When P2 and P3 are adjusted properly, there is no Envelope Drop at the beginning or end of the track as shown in Fig. M17-4. Remove the jumper wire.

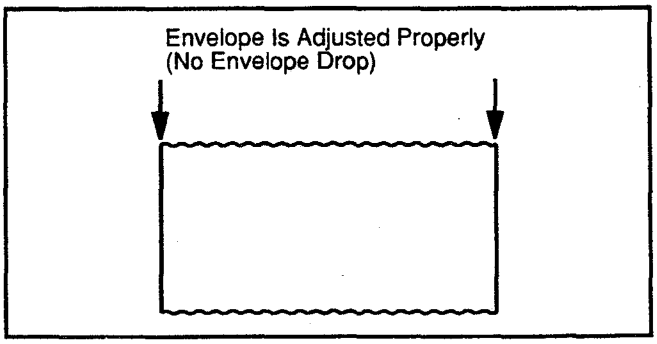

Envelope Is Adjusted Properly
(No Envelope Drop)

Fig. M17-4

Note:
Upon completion of the adjustment of P2 and P3, tighten the Black Lock Screws on P2 and P3 using the Lock Screw Wrench. Then confirm the Horizontal Position of the A/C Head by pushing the Tracking Control Up or Down Buttons alternately, using the IR Wireless Transmitter Unit, to check the symmetry of the envelope. If required, perform "Horizontal Position Adjustment of A/C Head."

9. ADJUSTMENT OF FG HEAD GAP

Purpose :
To properly pick up the FG Signal.

Symptom of Misadjustment :
If the FG Signal is not properly picked up, Servo Operation cannot be achieved.

* Equipment Required :
Oscilloscope

* Specification : .... 0.13 ± 0.02mm

1. Remove the VCR Chassis Unit and then place it upside down.
2. Remove the Main C.B.A.
3. Slightly loosen 2 Black Screws (A) and set the Screwdriver (#1 or #2 Phillips Driver) into the Hole (B) shown in Fig. M18. Turn the screwdriver counterclockwise until the FG Head touches the rotor. Then turn it slightly clockwise to the clearance as specified.
4. Tighten 2 Black Screws (A) shown in Fig. M18.
5. Reinstall the Main C.B.A.

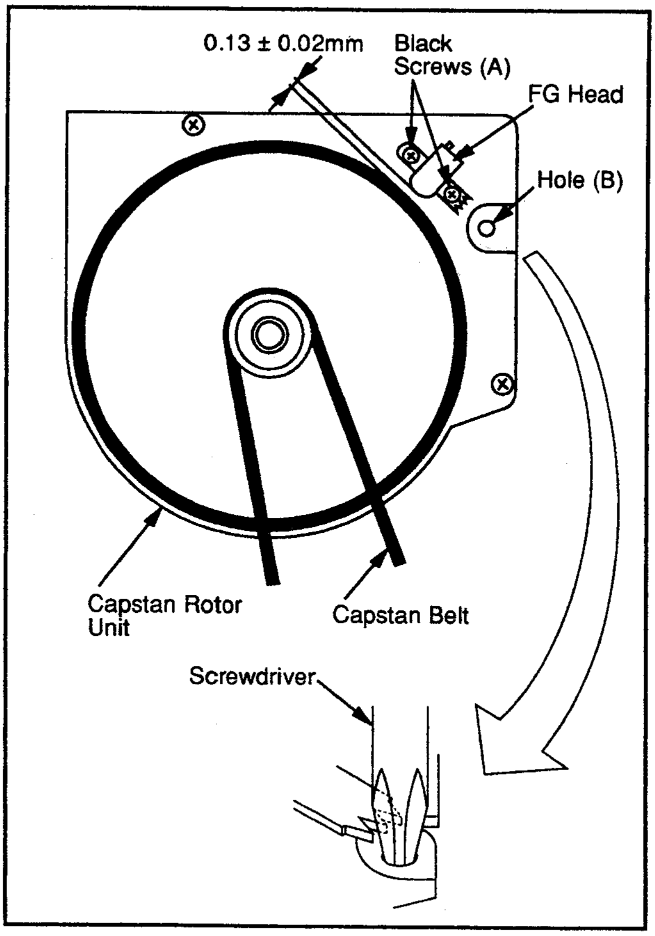

0.13 ± 0.02mm
Black Screws (A)
FG Head
Hole (B)
Capstan Rotor Unit
Capstan Belt
Screwdriver

Fig. M18

Note :
Do not touch the outside circumference of the rotor surface with any tool and keep magnetic material away from the rotor magnet (especially metal particles).

(Confirmation)

1) Supply a Video Signal to the Video Input Jack on the rear side of the deck.
2) Insert a cassette tape and place the unit in SLP recording mode.
3) Connect the oscilloscope to Pin 12 and 13 of P2502 on the Capstan Motor Drive C.B.A.
Confirm that the signal level is greater than 10mVp-p.

10. REPLACEMENT OF CAPSTAN ROTOR OR STATOR UNIT

1. Remove the Capstan Belt (Fig. M18).
2. In the order described in the Disassembly and Assembly Procedures of Mechanism section, remove the Motor Block Ass'y.
3. Carefully pull out the Capstan Rotor Unit. Be careful not to lose the 2 Oil Seals shown in Fig. M19.

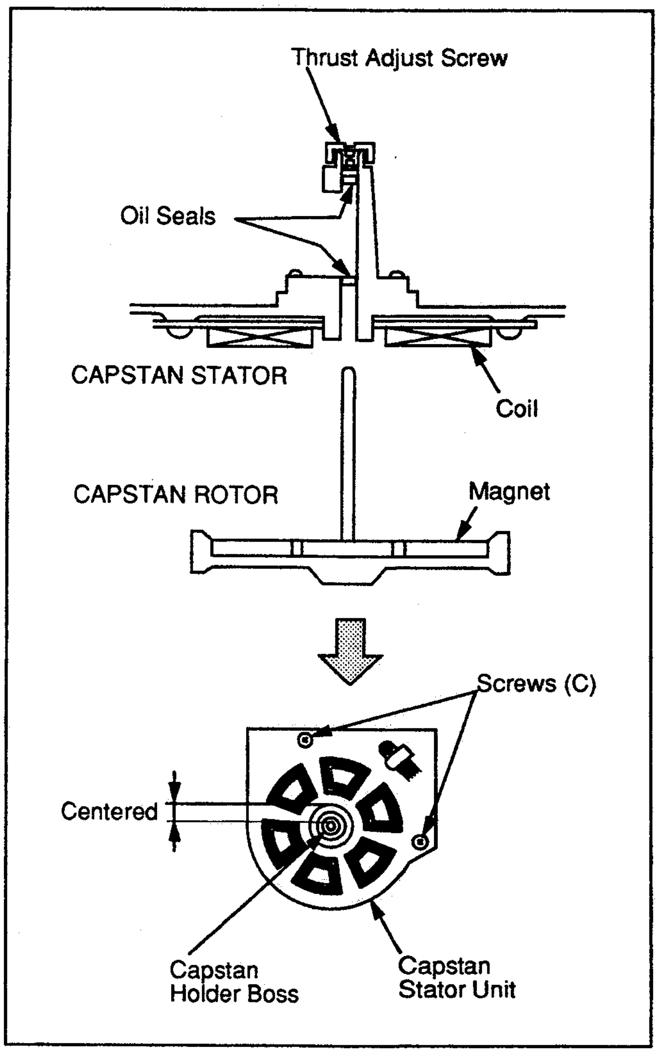

Thrust Adjust Screw
Oil Seals
CAPSTAN STATOR
Coil
CAPSTAN ROTOR
Magnet
Screws (C)
Centered
Capstan Holder Boss
Capstan Stator Unit

Fig. M19

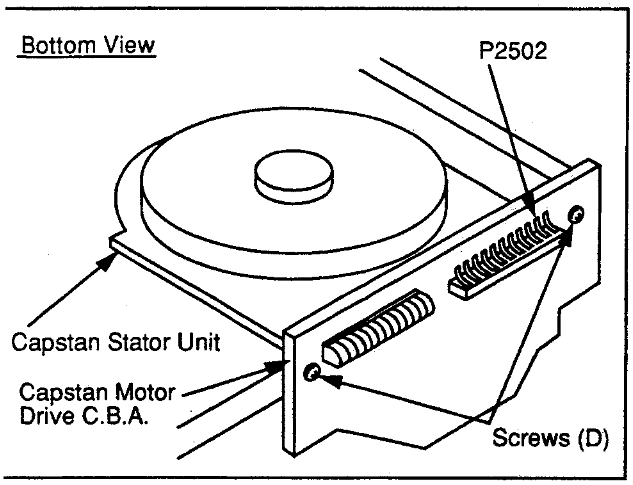


Fig. M20

Carefully unsolder P2502 on the Capstan Motor Drive C.B.A. Then remove the Capstan Motor Drive C.B.A. by removing 2 Screws (D) shown in Fig. M20.
Remove 2 Screws (C) and then lift out the Capstan Stator Unit.
Install the new Capstan Stator Unit and then tighten 2 Screws (C).

Note:
When reinstalling the Capstan Stator Unit, the Capstan Holder Boss must be centered within the hole in the Capstan Stator Unit.

Before installing the new Capstan Rotor Unit, loosen the Thrust Adjust Screw completely.
Install the new Capstan Rotor, carefully inserting the Oil Seals as shown in Fig. M19.

portant : See Caution Note below.

Caution Note :
1) The replacement Capstan Rotor Unit is available only as a complete unit with a spring loaded Capstan Pulley.
2) Hold the new Capstan Rotor Unit firmly when installing it, so the rotor will not be pulled toward the stator too quickly (due to magnetic force). Placing some paper on the coils before rotor installation may prevent accidental damage to the coils if the above caution is not observed.
3) During installation, do not touch the Capstan Shaft with any hard material like drivers or tweezers.

Re-install the Capstan Motor Drive C.B.A. by tightening 2 Screws (D). Then carefully solder P2502 and re-install the Motor Block Ass'y.

-------- ADJUSTMENT OF THRUST ADJUST SCREW AND OIL SEALS --------

10. Re-install the Capstan Belt and, while exerting pressure to turn the Clutch Unit, tighten the Thrust Adjust Screw slowly until the Capstan Rotor just starts turning.
11. At the point where the Capstan Rotor starts turning, tighten the Thrust Adjust Screw another 180° clockwise.
12. Upon completion of the above procedure, confirm that the Oil Seals are positioned as shown in Fig. M21 and be sure that the oil seal does not contact the Pressure Roller or P5 Arm Unit. Then, wipe off the Capstan Shaft to remove oil, grease, and dust.

Note :
1. During production, the Lower Oil Seal is positioned 6mm above the bushing as shown in Fig. M21. When servicing, the seal should be either 6mm or just above the bushing.
2. Clean the Capstan Post whenever an Oil Seal is moved.

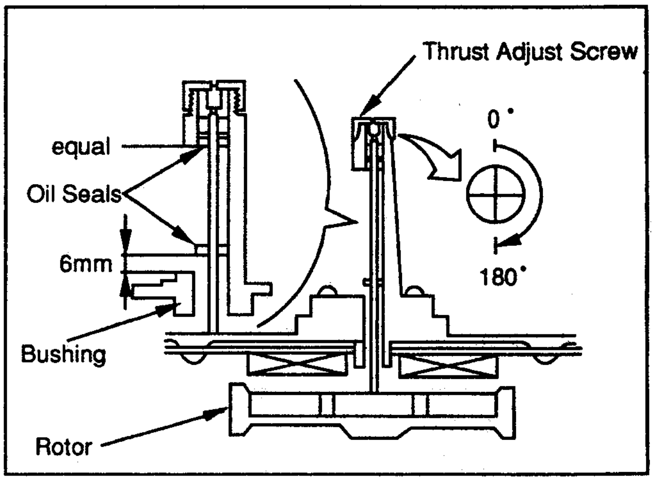


Fig. M21

11. DISASSEMBLY/ASSEMBLY PROCEDURES OF MECHANISM

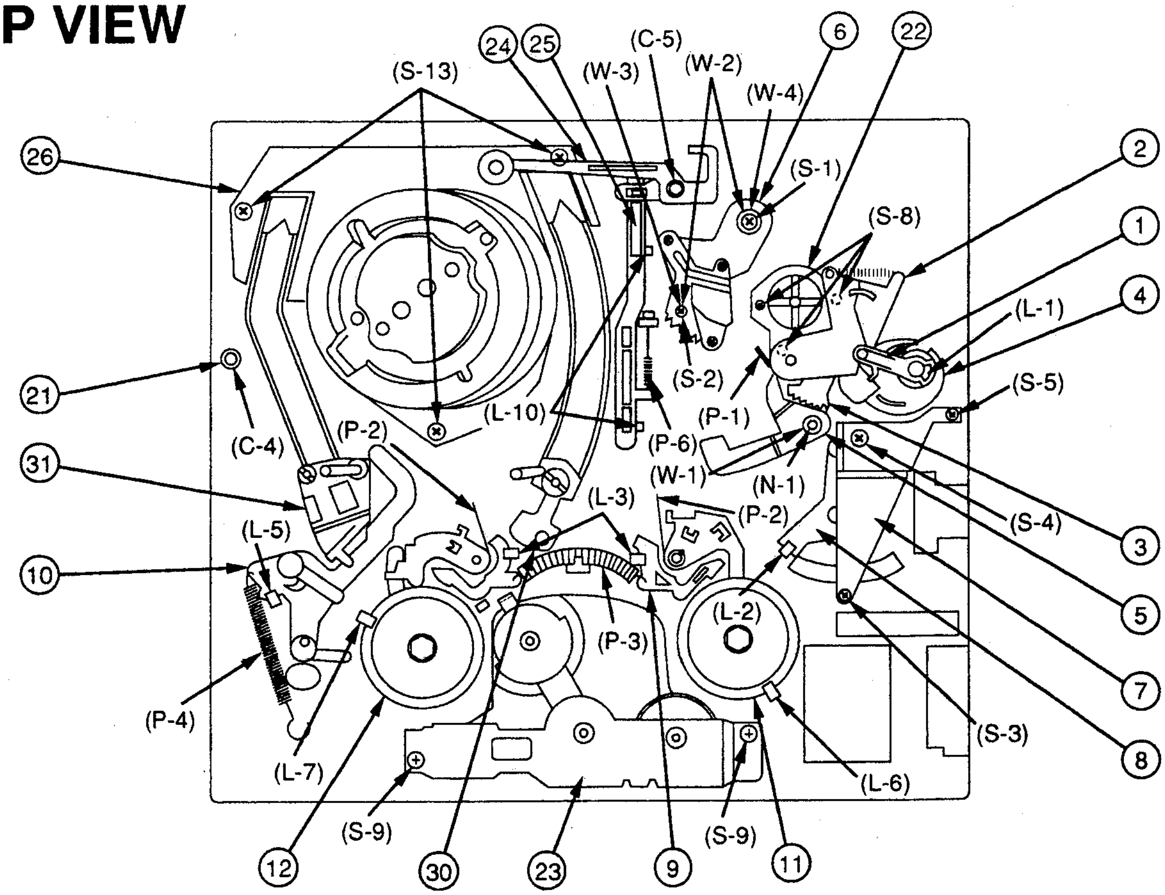
This procedure starts with the cabinet parts, Main C.B.A., and Cassette Up Ass'y already removed. Also, all the following procedures for adjustment and parts replacement should be done in EJECT Mode. When reassembling, follow the step(s) in reverse order.

STEP /LOC. No.	START -ING No.	PART		REMOVAL		INSTALLATION
				Fig. No.	REMOVE *UNHOOK/UNLOCK /RELEASE/UNPLUG /UNSOLDER	ADJUSTMENT #CONDITION
①	1	PINCH CAM CAP	T	DM1 DM3	*(L-1)	--
②	1	PRESSURE ROLLER ARM UNIT	T	DM1 DM3	<Note 1>	(+) ---
③	1	P5 SECTOR GEAR	T	DM1 DM4	(C-1), <Note 2>	(+) See Alignment Procedure for Mechanism, Item 12-5.
④	3	PINCH CAM	T	DM1 DM3	--------------------	(+) See Alignment Procedure for Mechanism, Item12-5.
⑤	4	P5 ARM UNIT	T	DM1 DM4	(N-1), (W-1), *(P-1)	(+) See Height Adjustment P5 Arm Unit.
⑥	6	A/C HEAD UNIT	T	DM1 DM5	(S-1), (S-2), 2(W-2) (W-3), (W-4),*P1541	(+) See Horizontal Position Adjustment of A/C Head.
⑦	7	OPENER ANGLE	T	DM1 DM6	(S-3), (S-4), (S-5)	--
⑧	7	CAM FOLLOWER ARM UNIT	T	DM1 DM6	*(L-2)	(+) <Note 3> See Installation Procedure of CAM FOLLOWER ARM UNIT, Item 12-4.
⑨	9	BRAKE ASS'Y	T	DM1 DM7	*2(P-2), *(P-3), *2(L-3), *2(L-4)	(+) See Setting Condition in Fig. DM7.
⑩	10	TENSION ARM UNIT	T	DM1 DM8	*(P-4), *(L-5)	(+) See Position Adjustment of Tension Post.
⑪	11	TAKEUP REEL TABLE UNIT	T	DM1	*(L-6)	(+) <Note 4> See Height Adjustment of Reel Tables.
⑫	12	SUPPLY REEL TABLE UNIT	T	DM1	*(L-7)	
⑬	13	CASSETTE DOWN DETECT PIECE	B	DM2	--------------------	--
⑭	14	MOTOR BLOCK ASS'Y	B	DM2 DM9	Unsolder, 2(S-6)	--

STEP /LOC. No.	START -ING No.	PART		REMOVAL		INSTALLATION
				Fig. No.	REMOVE *UNHOOK/UNLOCK /RELEASE/UNPLUG /UNSOLDER	ADJUSTMENT #CONDITION
⑮	15	CLUTCH UNIT	B	DM2 DM10	(C-2), <Note2> Capstan Belt	(+)---
⑯	16	P.C.B. BRACKET	B	DM2	(S-7)	---
⑰	14	SECONDARY ROD UNIT	B	DM2 DM11	*(P-5)	(+)---
⑱	17	MAIN ROD	B	DM2 DM12	(C-3),*2(L-8) <Note 2>	(+) See Alignment Procedure for Mechanism, Item12-2
⑲	18	LOADING ARM T UNIT	B	DM2 DM13	--------------------	(+) See Alignment Procedure for Mechanism, Item 12-1.
⑳	18	LOADING ARM S UNIT	B	DM2 DM13	*(L-9)	
㉑	21	P1 ROLLER	T	DM1	(C-4),<Note 2>	---
㉒	3	CAPSTAN HOLDER UNIT	T	DM1	3(S-8)	(+) See Replacement of Capstan Rotor or Stator Unit.
㉓	23	CENTER BLOCK UNIT	T	DM1	2(S-9)	---
㉔	24	HEAD CLEANER ARM UNIT	T	DM1 DM16	(C-5), <Note 2>	Model : B, C, D, E, F, G, I
㉕	24	HEAD CLEANER LINK LEVER	T	DM1 DM16	*(P-6), *2(L-10)	
㉖	24	CYLINDER BASE	T	DM1 DM15	3(S-13)	(+) ---
㉗	24	D.D. CYLINDER UNIT	B	DM2 DM15	3(S-11),2(S-12) Unsolder, Model : A, B, C, D, E Head Amp Ass'y Model : F, G, H, I Hi-Fi Audio / Video Head Amp Ass'y	See, Replacement of D.D. Cylinder Unit.
㉘	14	CAPSTAN ROTOR UNIT	B	DM2 DM14	--------------------	(+) See, Replacement of Capstan Rotor or Stator Unit.
㉙	28	CAPSTAN STATOR UNIT	B	DM2 DM14	3(S-14), Unsolder	See, Replacement of Capstan Rotor or Stator Unit.
㉚	26	LOADING POST BASE T UNIT	T	DM1	Slide to rear to remove	(+) ---
㉛	26	LOADING POST BASE S UNIT	T	DM1	Slide to rear to remove	

List of Abbreviations:
T=Top; B=Bottom
(P-1)=Spring (P-1); 3(S-1)=3 Screws(S-1);
3(W-1)=3 Washers (W-1); (C-1)=Cut Washer(C-1);
(N-1)=Nut (N-1); 2(L-1)=2 Locking Tabs (L-1)
(+): Refer to Exploded Views for Lubrication Information.
= Condition for adjustment.

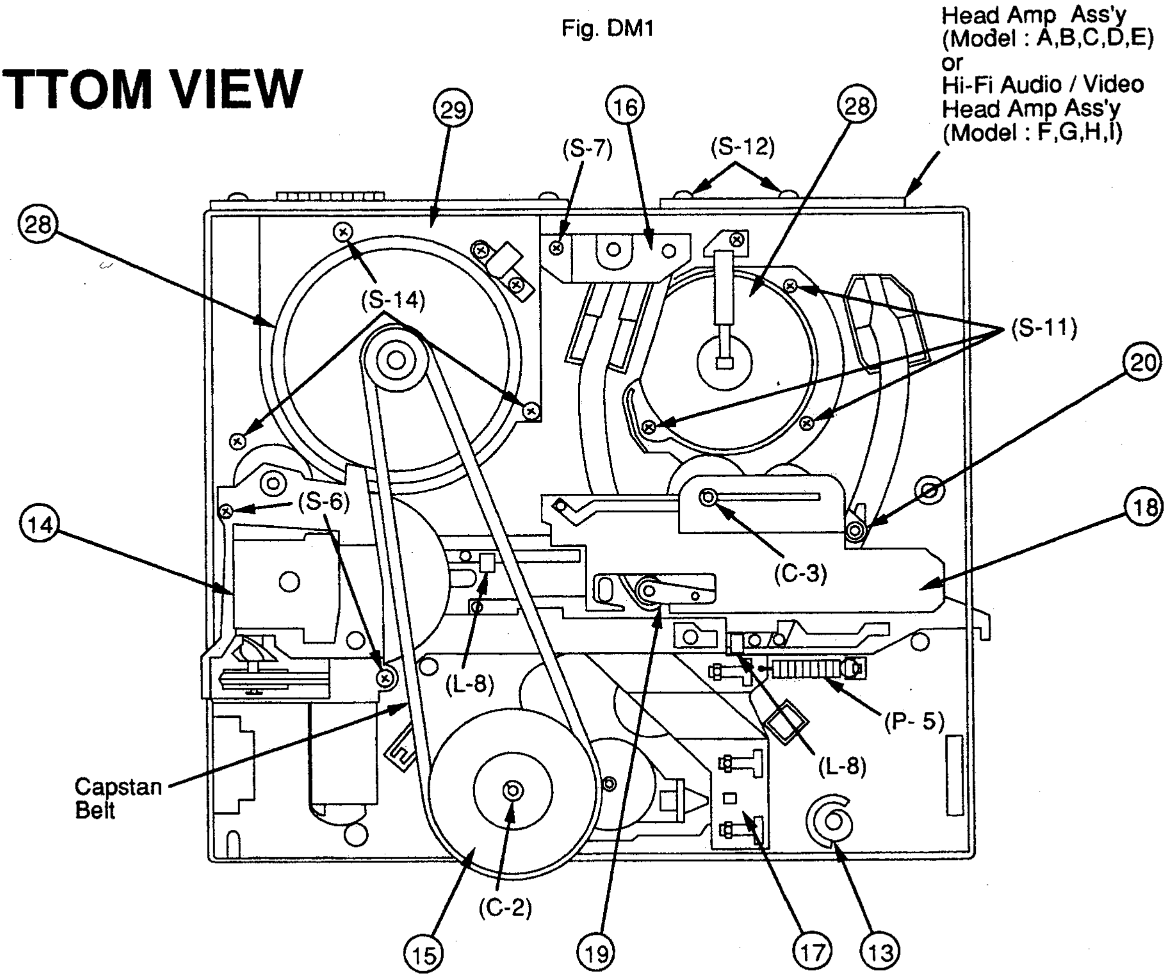
TOP VIEW



㉔
㉕
(C-5)
(W-3)
(W-2)
(W-4)
⑥
㉒
(S-13)
㉖
(S-1)
②
(S-8)
①
(L-1)
④
(S-5)
㉑
(C-4)
(S-2)
(L-10)
(P-1)
(P-2)
(P-6)
㉛
(W-1)
(N-1)
(L-3)
(P-2)
(S-4)
③
(L-5)
⑤
⑩
(L-2)
(P-3)
⑦
(P-4)
(S-3)
⑧
(L-7)
(L-6)
(S-9)
(S-9)
⑫
㉚
㉓
⑨
⑪

Fig. DM1

BOTTOM VIEW



Head Amp Ass'y
(Model : A,B,C,D,E)
or
Hi-Fi Audio / Video
Head Amp Ass'y
(Model : F,G,H,I)
㉙
⑯
㉘
(S-7)
(S-12)
㉘
(S-14)
(S-11)
⑳
(S-6)
⑱
⑭
(C-3)
(L-8)
(P- 5)
(L-8)
Capstan
Belt
(C-2)
⑮
⑲
⑰
⑬

Fig. DM2

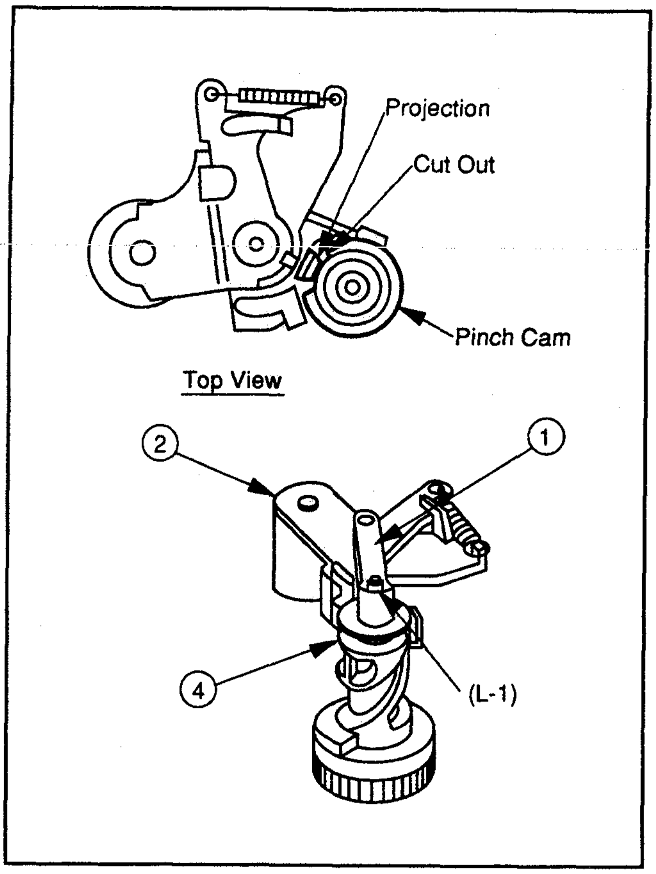

Projection
Cut Out
Pinch Cam
Top View
②
①
④
(L-1)

Fig. DM3

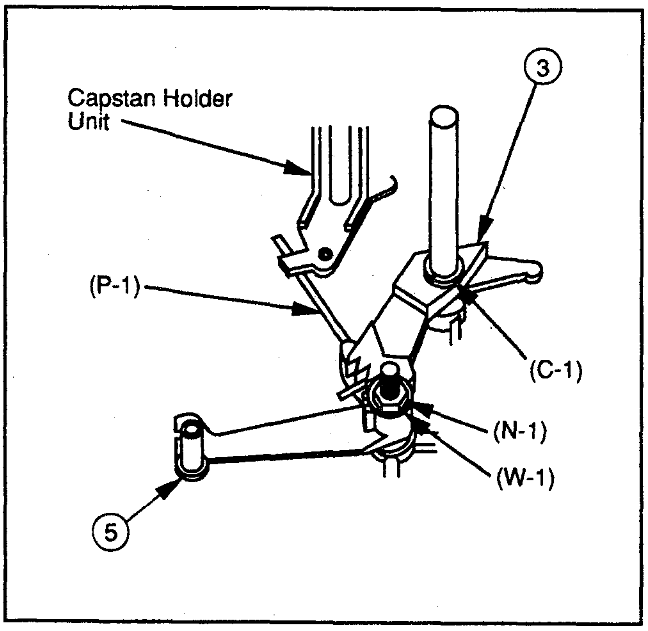

Capstan Holder Unit
③
(P-1)
(C-1)
(N-1)
(W-1)
⑤

Fig. DM4

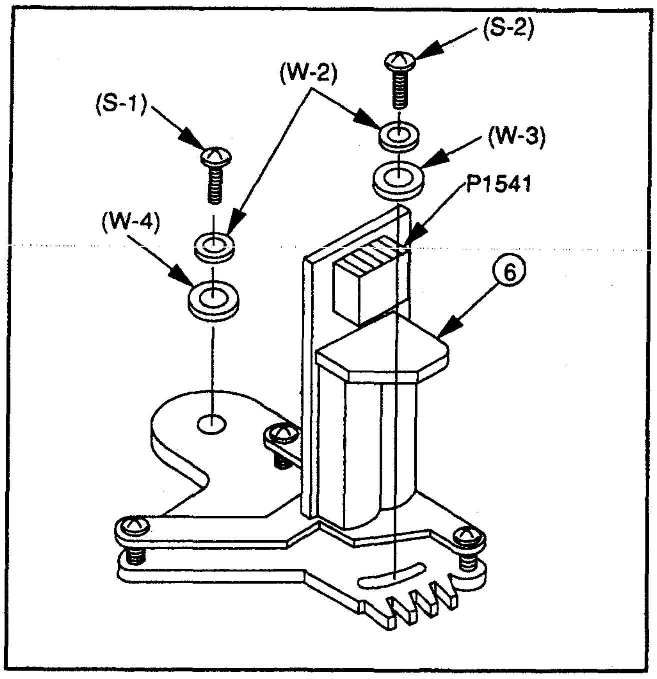

(S-2)
(W-2)
(S-1)
(W-3)
P1541
(W-4)
⑥

Fig. DM5

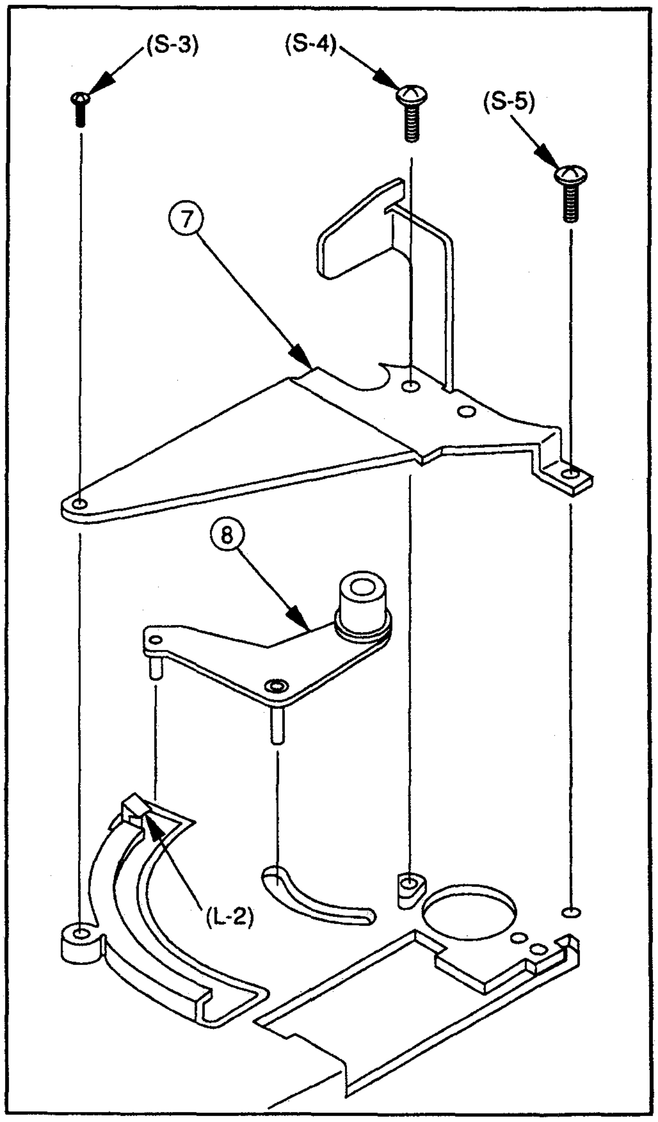

(S-3)
(S-4)
(S-5)
⑦
⑧
(L-2)

Fig. DM6

Main Brake Spring/Soft Brake Springs Hook Positions

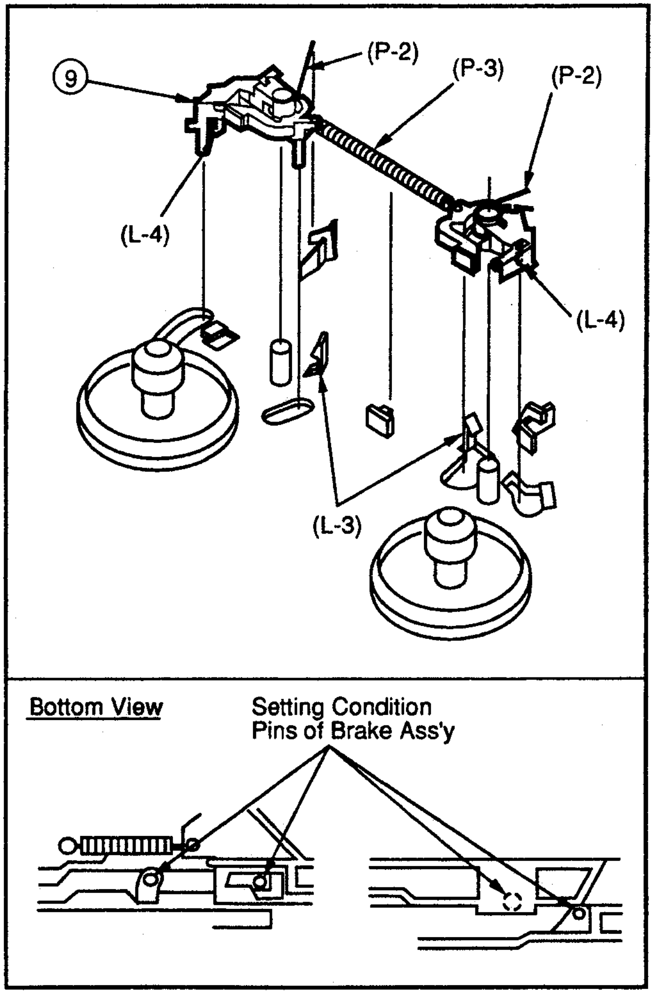

9
(P-2)
(P-3)
(P-2)
(L-4)
(L-4)
(L-3)
Bottom View
Setting Condition
Pins of Brake Ass'y

Fig. DM7

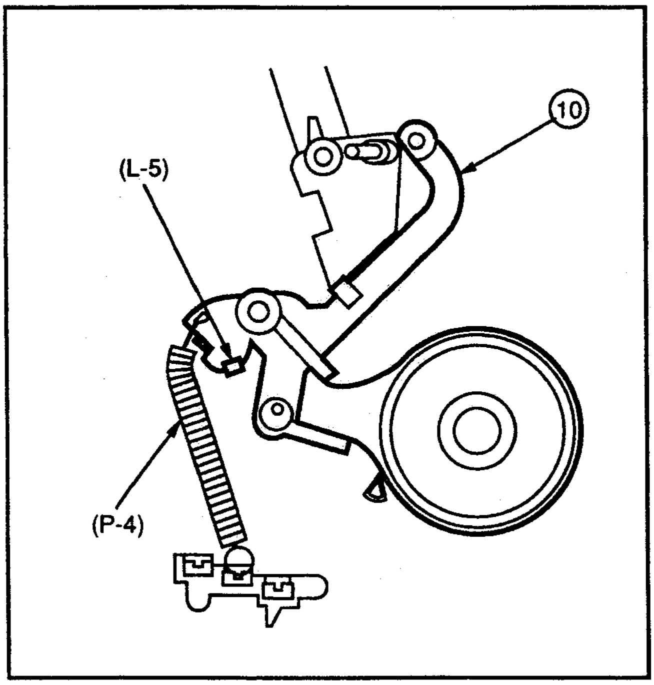


Fig. DM8

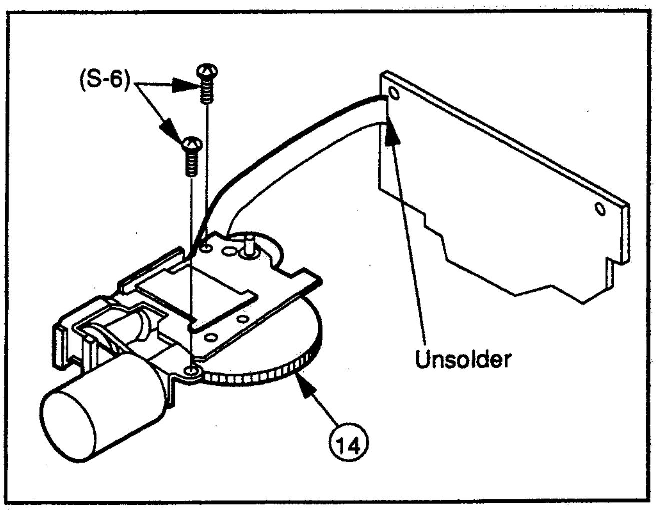

(S-6)
Unsolder
14

Fig. DM9

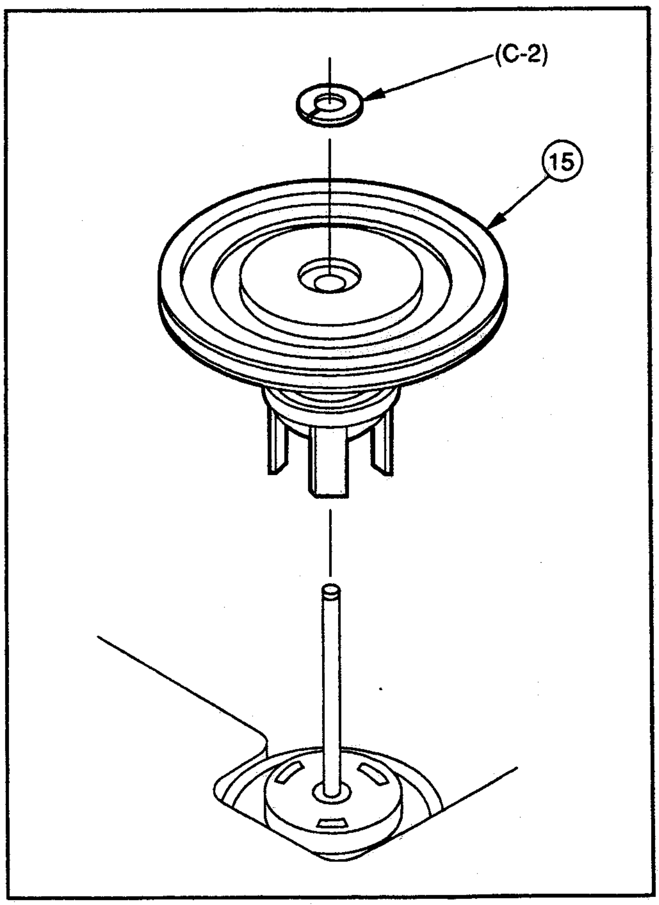


Fig. DM10

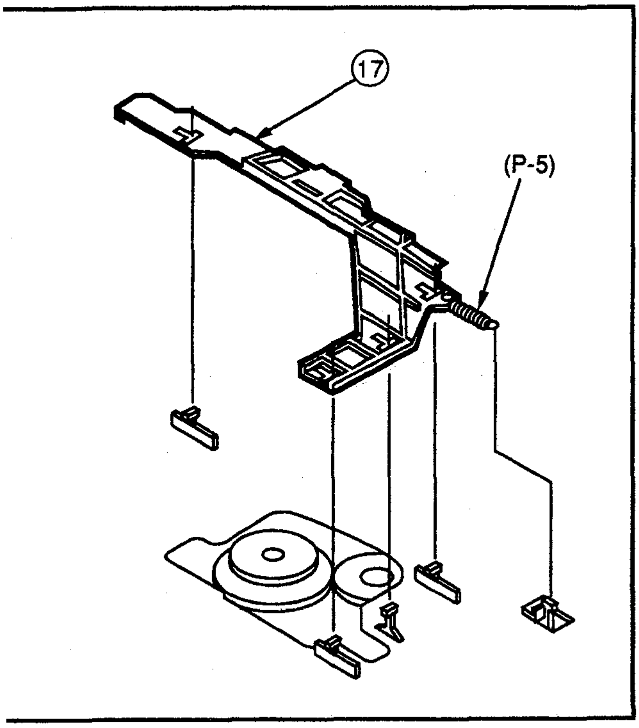


Fig. DM11

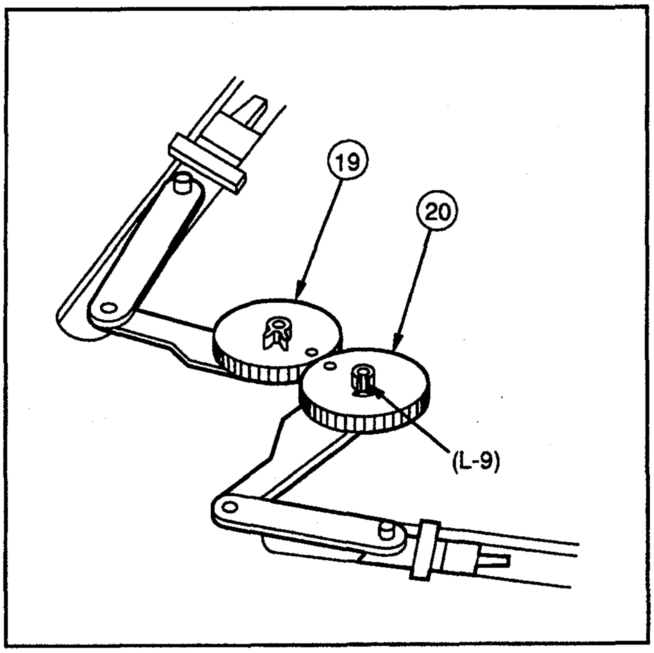


Fig. DM13

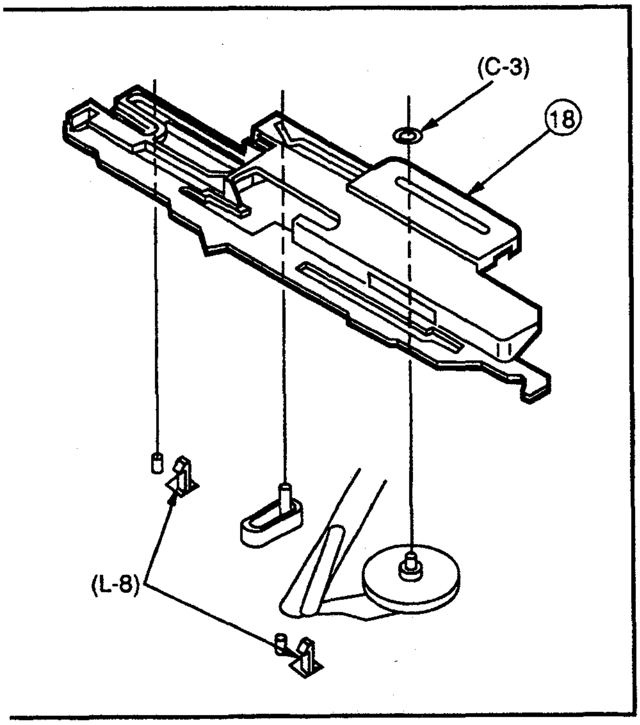
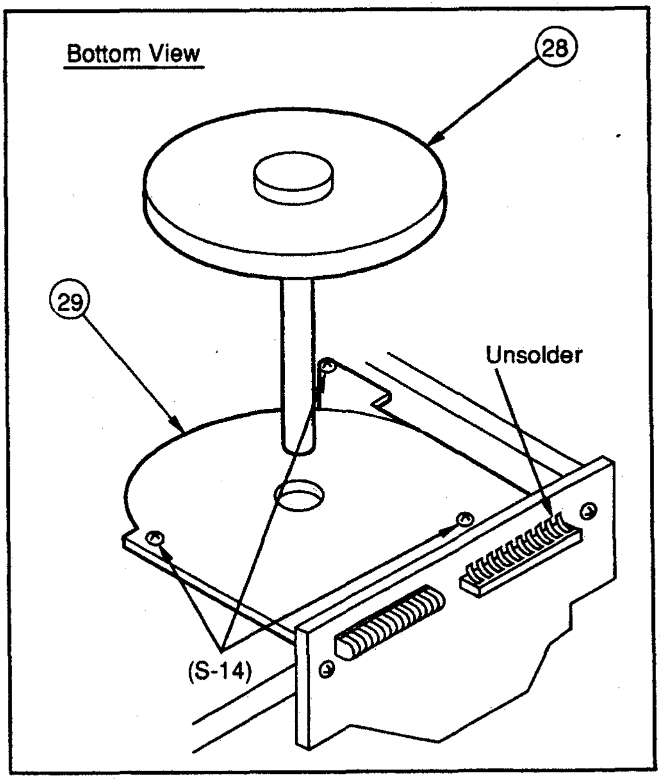


Fig. DM12



Bottom View
㉘
㉙
Unsolder
(S-14)

Fig. DM14

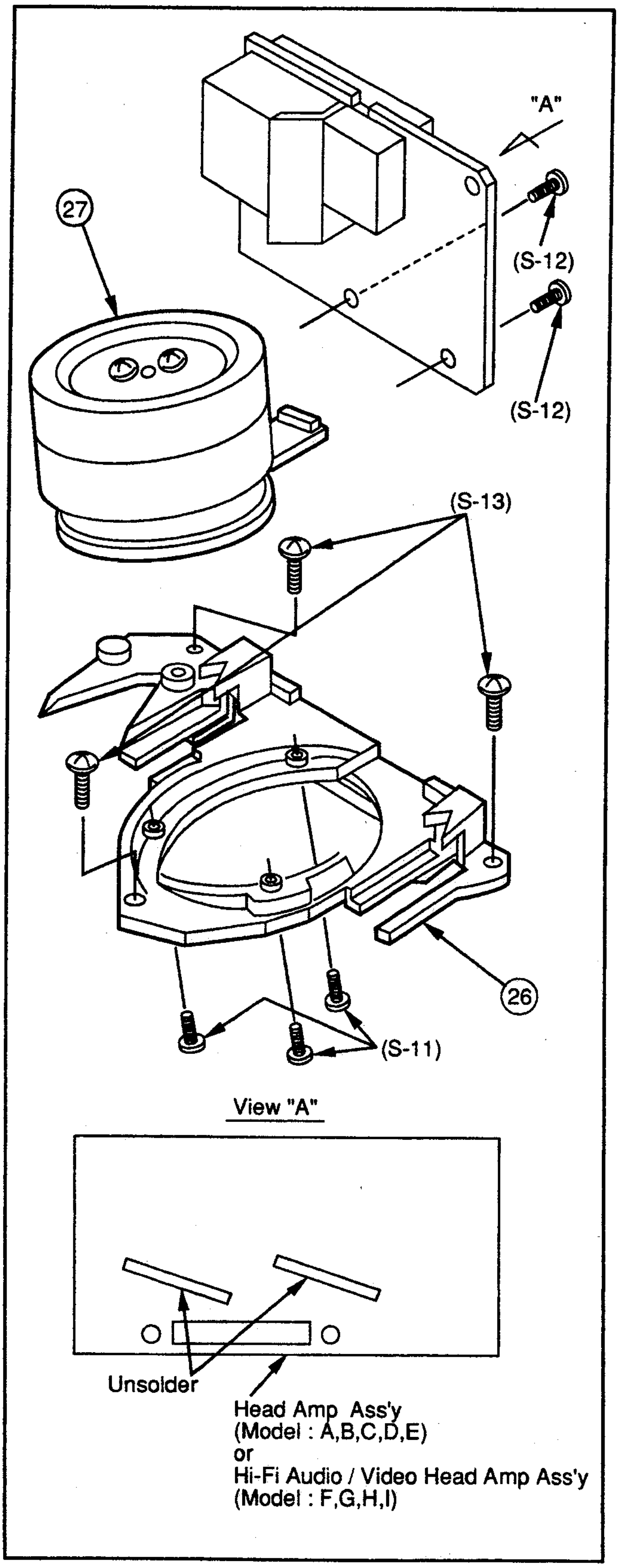

"A"
(27)
(S-12)
(S-12)
(S-13)
(26)
(S-11)
View "A"
Unsolder
Head Amp Ass'y
(Model : A,B,C,D,E)
or
Hi-Fi Audio / Video Head Amp Ass'y
(Model : F,G,H,I)

Fig. DM15

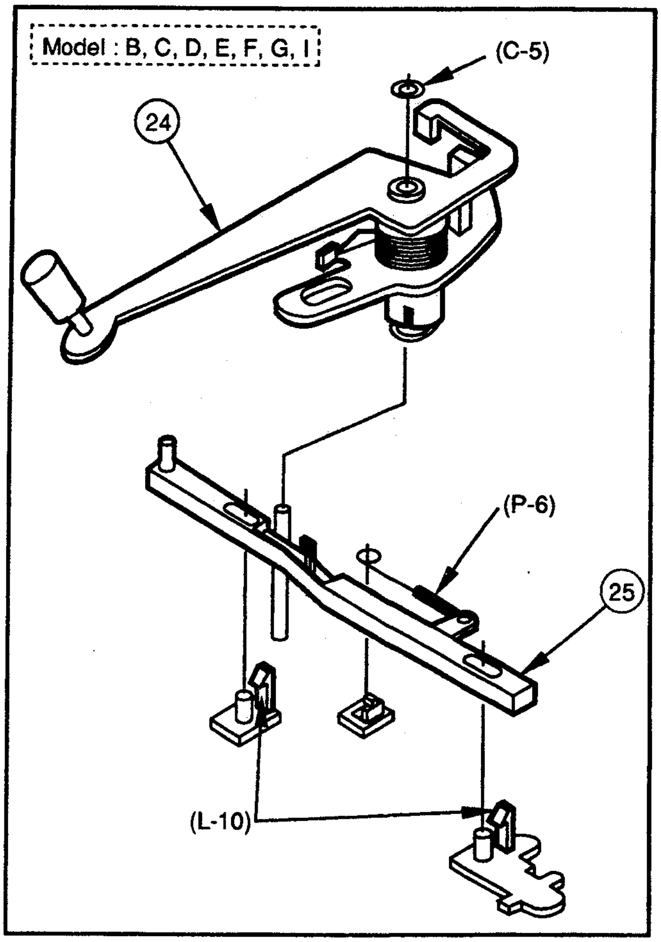

Model : B, C, D, E, F, G, I
(C-5)
(24)
(P-6)
(25)
(L-10)

Fig. DM1 6

Reference <Notes> in Table 11 :

1. Before removing the Pressure Roller Arm Unit, turn the Loading Pulley of the Motor Block Ass'y. Then align the projection of the Pressure Roller Arm Unit and the cut out portion of the Pinch Cam.
2. This cut washer is not reusable. If removed, install a new one.
3. Install the Cam Follower Arm Unit so that the pin on the Cam Follower Arm Unit meets the inner slot of the Motor Block Ass'y.
4. When reinstalling the Supply and Takeup Reel Tables, clean the rotating surface on them with a soft cloth.

12. ALIGNMENT PROCEDURES OF MECHANISM

The mechanism of this model is mostly engaged to the System Control Circuit through the Mode Select Switch. Therefore the connection between the Mode Select Switch and the Cam Gear decides all further movement of the mechanical parts such as levers, gears, rollers, and so on. For specific removal and installation procedures, refer to the Disassembly/ Assembly Procedures on Page 2-17.
If these parts are not properly aligned, even if off by only one tooth, the unit will be unloaded or stopped. It may result in damage to the mechanical or electrical parts. This mechanical adjustment is performed in the Eject Mode. The details concerning the mechanical condition will be described later.

Important Note:
All through hole alignments must be made precisely so that the complete procedure will exactly align the gear teeth. If the alignment is off by only one tooth then the mechanism will not operate properly.

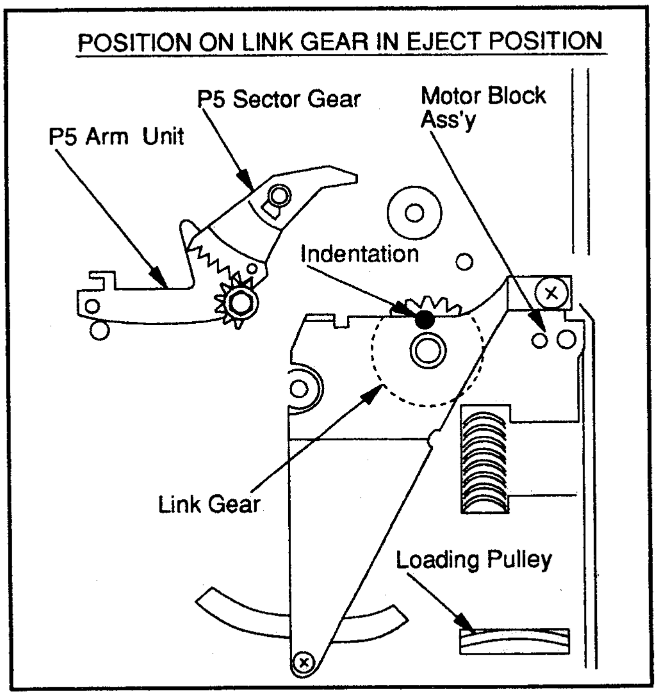

POSITION ON LINK GEAR IN EJECT POSITION
P5 Sector Gear
Motor Block Ass'y
P5 Arm Unit
Indentation
Link Gear
Loading Pulley

Fig. A1

1. The position of the Indentation on the Link Gear, after removing the Cassette Up Unit with the Motor Block Ass'y in the Eject Position, is shown in Fig. A1.

12-1. ALIGNMENT PROCEDURES OF LOADING ARM T UNIT AND LOADING ARM S UNIT

1. Set the P2 and P3 posts to the unloading position. Then install the Loading Arm T Unit and the Loading Arm S Unit so that the hole on the Loading Arm T Unit is exactly in line with the hole on the Loading Arm S Unit.

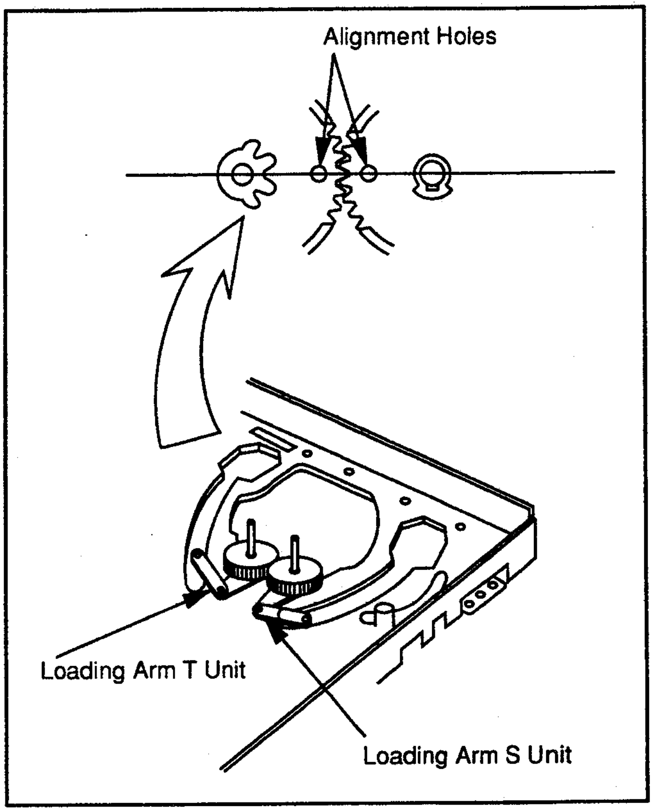

Alignment Holes
Loading Arm T Unit
Loading Arm S Unit

Fig. A2

12-2. ALIGNMENT PROCEDURES FOR MAIN ROD

1. Install the Main Rod so that the line on the Main Rod aligns with the Shaft of the Loading Arm T Unit. Make sure the Shafts of the Brake Ass'y, Shaft of the Head Cleaner Link Lever : Model B,C,D,E,F,G,I , and the Shaft of the Cam Follower Arm Unit are positioned as shown in Fig. A3.

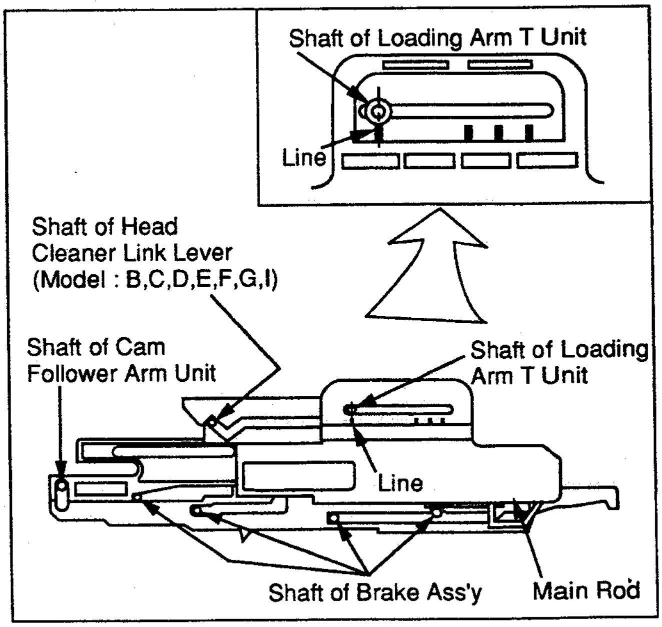

Shaft of Loading Arm T Unit
Line
Shaft of Head Cleaner Link Lever (Model : B,C,D,E,F,G,I)
Shaft of Cam Follower Arm Unit
Shaft of Loading Arm T Unit
Line
Shaft of Brake Ass'y
Main Rod

Fig. A3

12-3. ALIGNMENT PROCEDURES OF LINK GEAR, CAM GEAR, AND MODE SELECT SWITCH

1. Install the Cam Gear so that the Indentation on the Cam Gear aligns with the Hole on the Link Gear.
2. Install the Mode Select Switch so that the Hole on the Mode Select Switch aligns with the Indentation on the Cam Gear. Refer to Fig. A4.

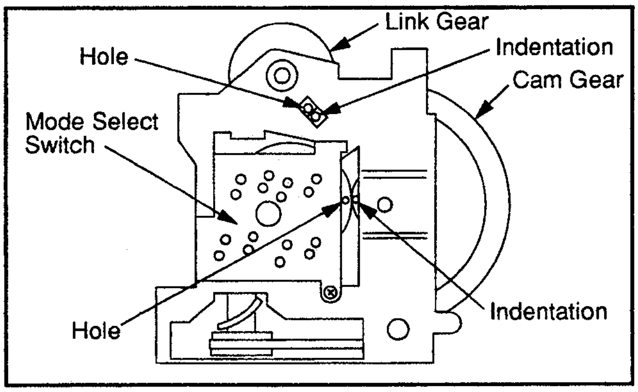

Link Gear
Hole
Indentation
Cam Gear
Mode Select Switch
Hole
Indentation

Fig. A4

12-4. INSTALLATION PROCEDURES OF CAM FOLLOWER ARM UNIT

1. Confirm that the Cassette Up Unit is in the Eject Position.
2. Then install the Cam Follower Arm Unit, as shown in Fig. A5.
3. Confirm that Shaft A is installed into the slot of the Main Rod.
4. Confirm that Shaft B is installed into the groove on the gear of the Motor Block Ass'y at the point indicated by the arrow in Fig. A5.

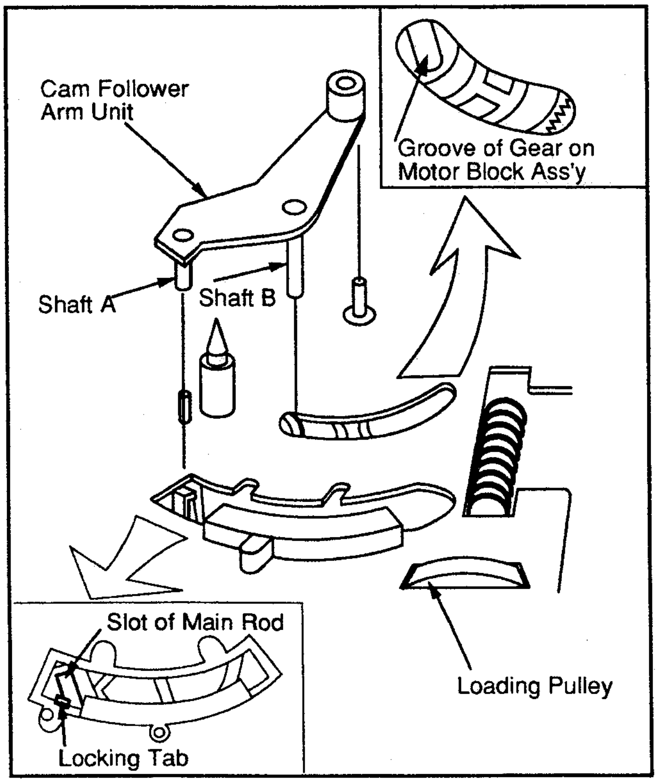

Cam Follower Arm Unit
Groove of Gear on Motor Block Ass'y
Shaft A
Shaft B
Slot of Main Rod
Locking Tab
Loading Pulley

Fig. A5

12-5. ALIGNMENT PROCEDURES OF P5 ARM UNIT AND P5 SECTOR GEAR, PINCH CAM, AND LINK GEAR

1. When installing the Pinch Cam, confirm that the Link Gear of the Motor Block Ass'y is in the Eject Position .
2. Install the P5 Sector Gear and Pinch Cam simultaneously. The last tooth on the P5 Arm Unit must align with the hole on the P5 Sector Gear and the hole on the Pinch Cam must align with the Indentation on the Link Gear.

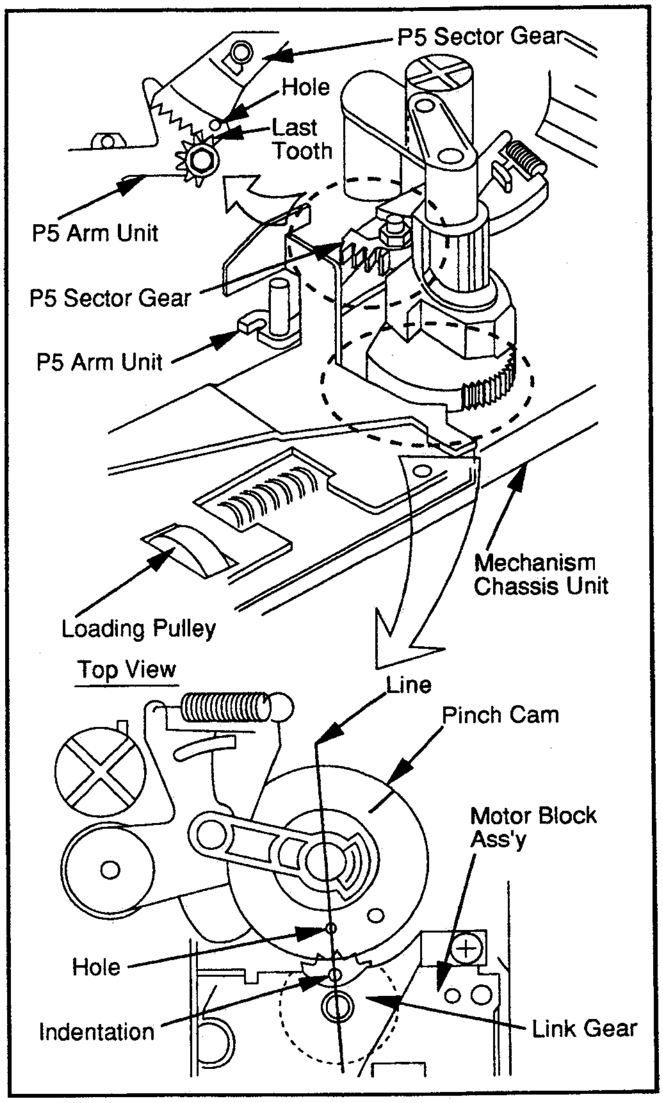

P5 Sector Gear
Hole
Last Tooth
P5 Arm Unit
P5 Sector Gear
P5 Arm Unit
Mechanism Chassis Unit
Loading Pulley
Top View
Line
Pinch Cam
Motor Block Ass'y
Hole
Indentation
Link Gear

Fig. A6

13. DISASSEMBLY / ASSEMBLY AND ADJUSTMENT OF CASSETTE UP ASS'Y

When reassembling, follow the steps in reverse order.

STEP /LOC. NO.	START- ING NO.	PART		REMOVAL		INSTALLATION
				FIG. NO.	REMOVE *UNHOOK/UNLOCK/RELEASE	ADJUSTMENT #CONDITION
①	1	TOP PLATE	T	DA1	(S-1), Grounding Plate, *4(L-1)	....
②	2	SUB PLATE UNIT	R	DA2	*4(L-2)	(+) ....
③	3	WIPER ARM -L	L	DA3	*(L-6), Wiper Spring -L	(+) <Note 1>
④	2	MAIN SHAFT UNIT	T	DA1	....	<Note 2>
⑤	2	CASSETTE GUIDE	T	DA1	....	....
⑥	2	HOLDER GUIDE -L	C	DA4	*2(L-8)	(+) ....
⑦	2	CASSETTE HOLDER GUIDE R UNIT	C	DA4	*2(L-9)	(+) ....
⑧	2	SET LEVER -L	C	DA4	*2(L-10), Set Lever Spring	<Note 3>
⑨	2	WIPER ARM R UNIT	R	DA2	*(L-3)	(+) Align the hole.<Note 4>
⑩	8	GENEVA GEAR UNIT	R	DA2	*(L-7)	(+) Align the hole.<Note 4>
⑪	2	CASSETTE LEVER	R	DA2	*(L-11)	....
⑫	2	SENSOR COVER	R	DA2	*(L-4)	....
⑬	2	WORM WHEEL	R	DA2	*(L-5)	(+) Hole at bottom.

(Top)

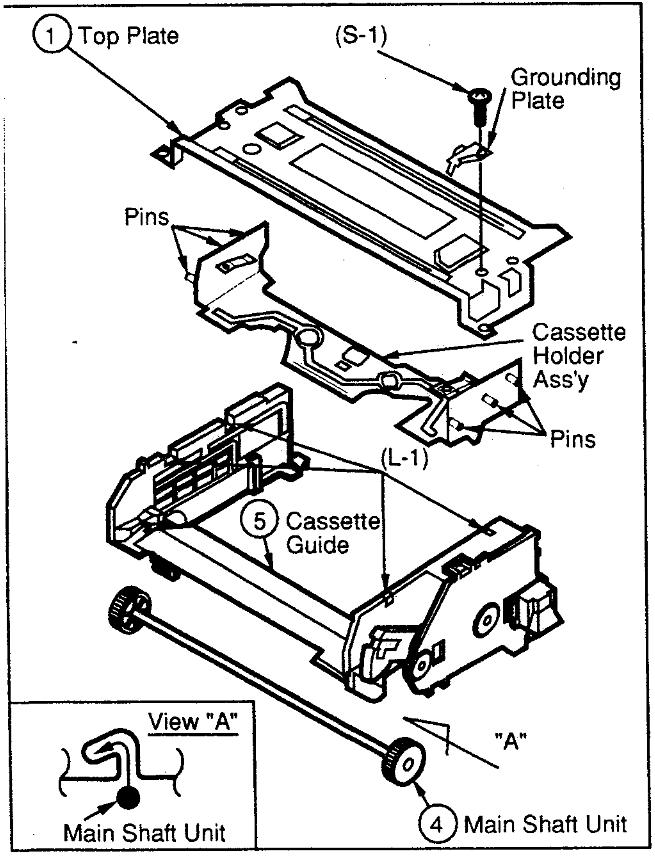


Fig. DA1

List of Abbreviations:
T= Top, R = Right, L=Left, C= Cassette Holder Ass'y;
3(L-1)= 3 Locking Clips(L-1)
(+) Refer to Exploded Views for Lubrication Information.

Reference <Notes> in Table 13:

1. When installing Wiper Arm -L onto Side Plate -L, put the slot of Wiper Arm -L into the pin of the Cassette Holder Ass'y in the Eject Position.
2. When installing the Main Shaft Unit, as shown in Fig. DA1, install the Main Shaft Unit in the direction shown by the arrow in view "A".
3. When installing Set Lever -L, as shown in Fig. DA4, fit the holes on the Set Lever over the hook of Holder Guide -L. Then hook the Set Lever Spring onto ⓓ and ⓔ.
4. When installing Sub Plate -R onto Side Plate (R), put the slot of Wiper Arm -R over the pin of the Cassette Holder Ass'y in the Eject Position.

(Right Side)

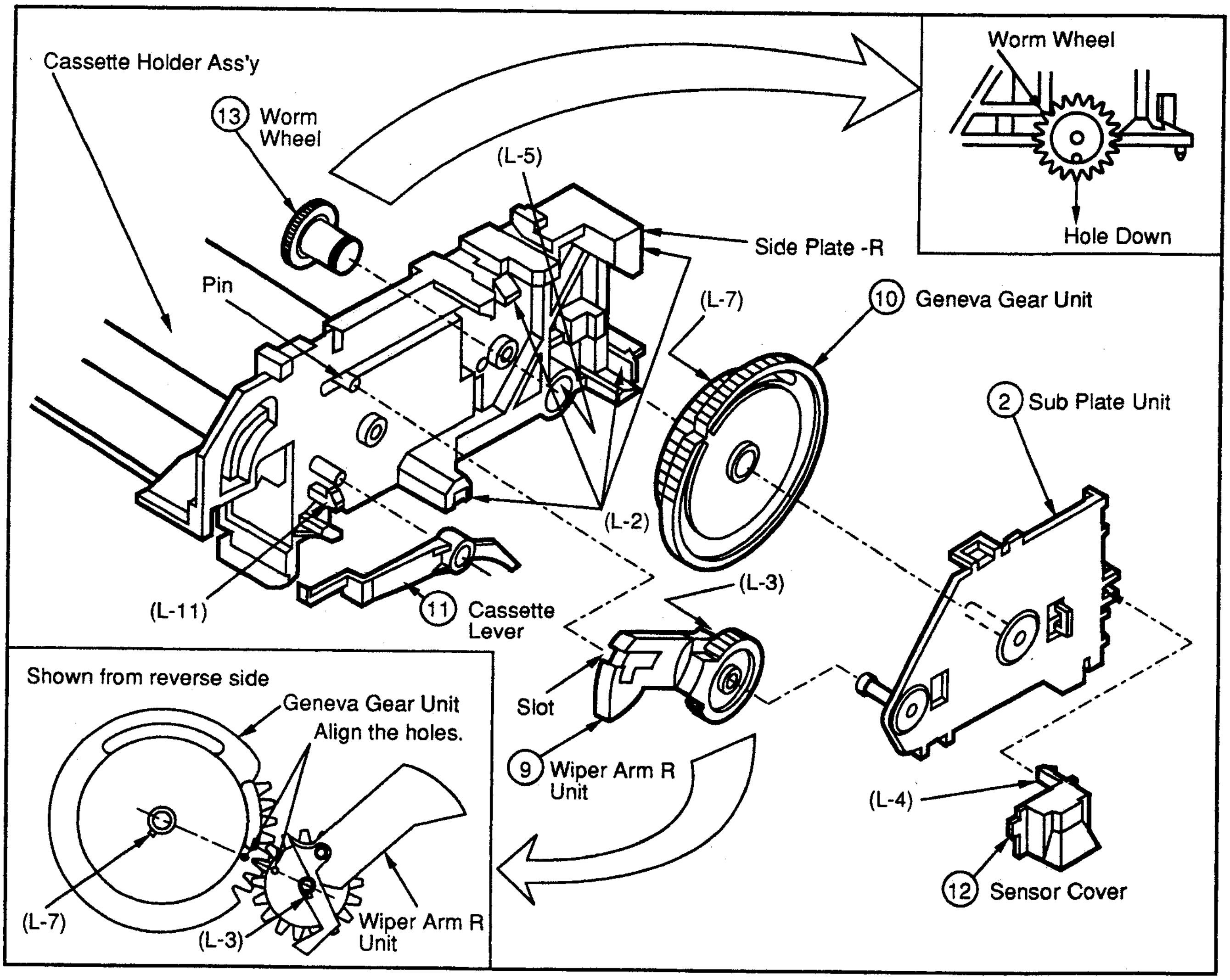

Cassette Holder Ass'y
⑬ Worm Wheel
(L-5)
Worm Wheel
Hole Down
Side Plate -R
Pin
(L-7)
⑩ Geneva Gear Unit
② Sub Plate Unit
(L-2)
(L-3)
(L-11)
⑪ Cassette Lever
Slot
⑨ Wiper Arm R Unit
(L-4)
⑫ Sensor Cover
Shown from reverse side
Geneva Gear Unit
Align the holes.
(L-7)
(L-3)
Wiper Arm R Unit

Fig. DA2

(Left Side)

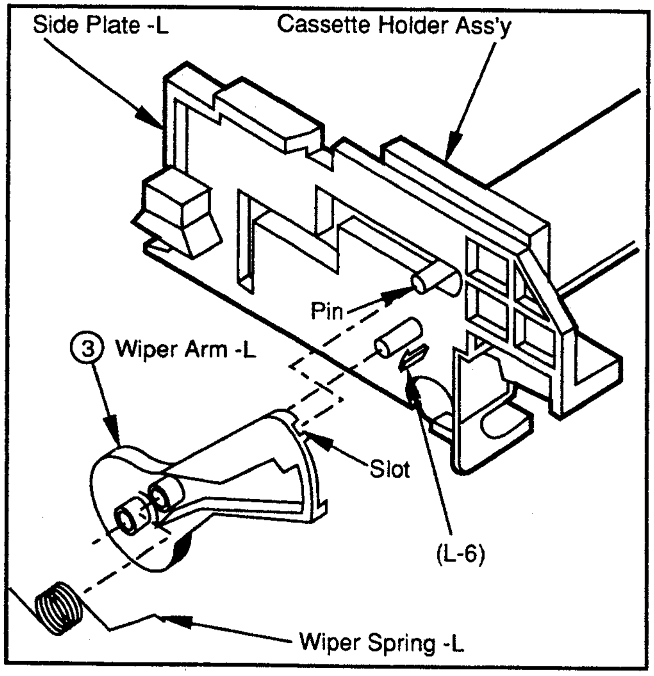

Side Plate -L
Cassette Holder Ass'y
Pin
③ Wiper Arm -L
Slot
(L-6)
Wiper Spring -L

Fig. DA3

(Cassette Holder Ass'y)

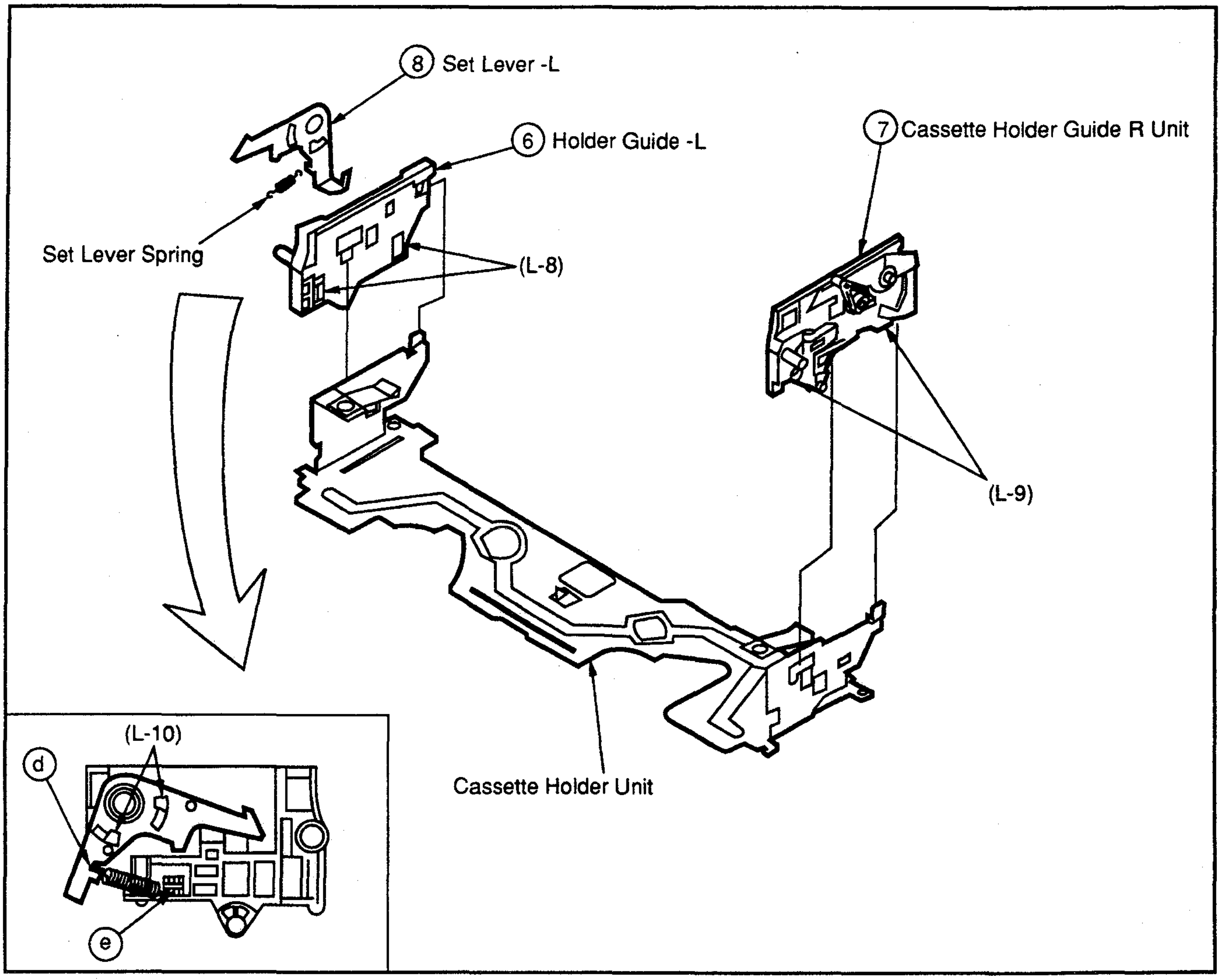

⑧ Set Lever -L
⑥ Holder Guide -L
⑦ Cassette Holder Guide R Unit
Set Lever Spring
(L-8)
(L-9)
(L-10)
d
e
Cassette Holder Unit

Fig. DA4

14. ADJUSTMENT OF CASSETTE UP ASS'Y AND CHASSIS

When reinstalling the Cassette Up Ass'y, the mechanical adjustment (alignment) described below should be done to ensure proper operation. Then, before reinstalling the Cassette Up Ass'y, be sure that the hole on the Wiper Arm R Unit is aligned with the hole on the Geneva Gear. The Cassette Holder Ass'y must be in the Eject Position .

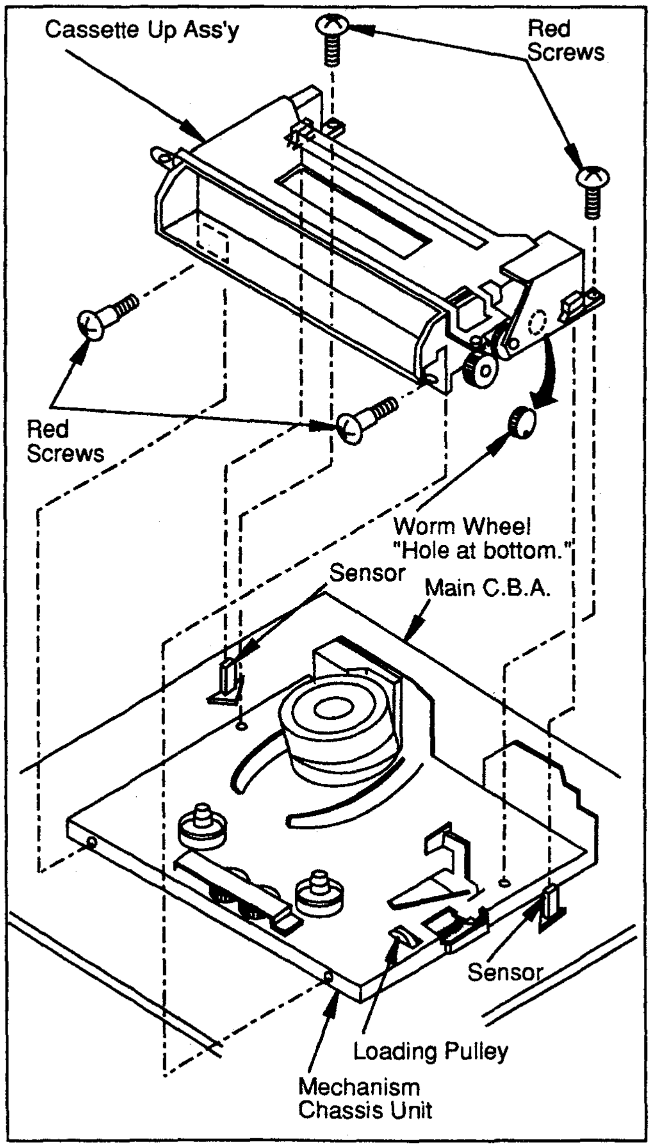
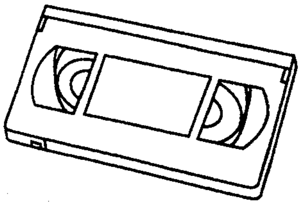

Cassette Up Ass'y
Red Screws
Red Screws
Worm Wheel "Hole at bottom."
Sensor
Main C.B.A.
Sensor
Loading Pulley
Mechanism Chassis Unit

Fig. DA5

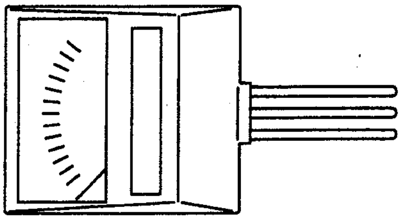
1. Turn the Loading Pulley of the Motor Block Ass'y clockwise. Then be sure that the Mechanism is placed fully into the Eject position and maintain this position.
2. Slowly install the Cassette Up Ass'y onto the chassis so that the worm wheel fits into the gear on the Motor Block Ass'y.
3. Then confirm that the Sensors fits properly into the Sensor Covers.
4. Confirm that the hole in the Worm Wheel is in the correct position. (See Fig. DA5)
5. Reinstall the 4 Red Screws as shown in Fig. DA5.
6. Check the operation of the Cassette Loading Mechanism manually and then confirm proper operation with the power turned on.

B. SERVICE FIXTURES AND TOOLS

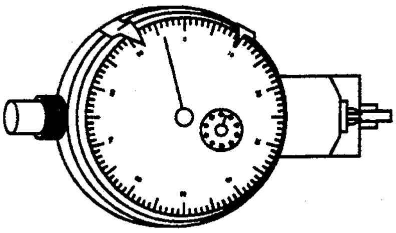
VFMS0001H6 VHS Alignment Tape



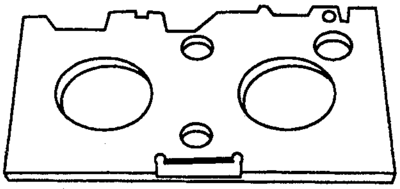
Back Tension Meter
(Made in USA., Purchase Locally)



VFKS0009 Reel Table Height Fixture



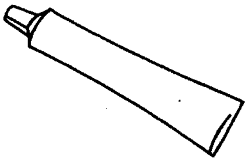
VFKS0010 Post Adjustment Plate



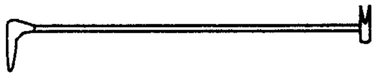
VFKS0081 Grease

VFK0329 Post Adjustment Screwdriver

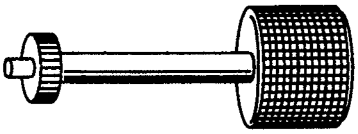
MOR265 Molytone Grease



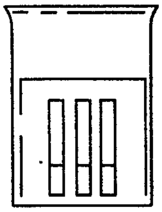
VFKS0032 Lock Screw Wrench



VFKS0080 H-Position Adj. Screwdriver



VFK27 Head Cleaning Stick

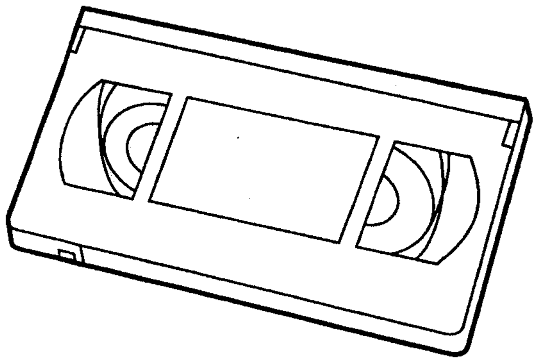


C. ELECTRICAL ADJUSTMENT PROCEDURES

1. TEST EQUIPMENT

To do all of these electrical adjustments, the following equipment is required.

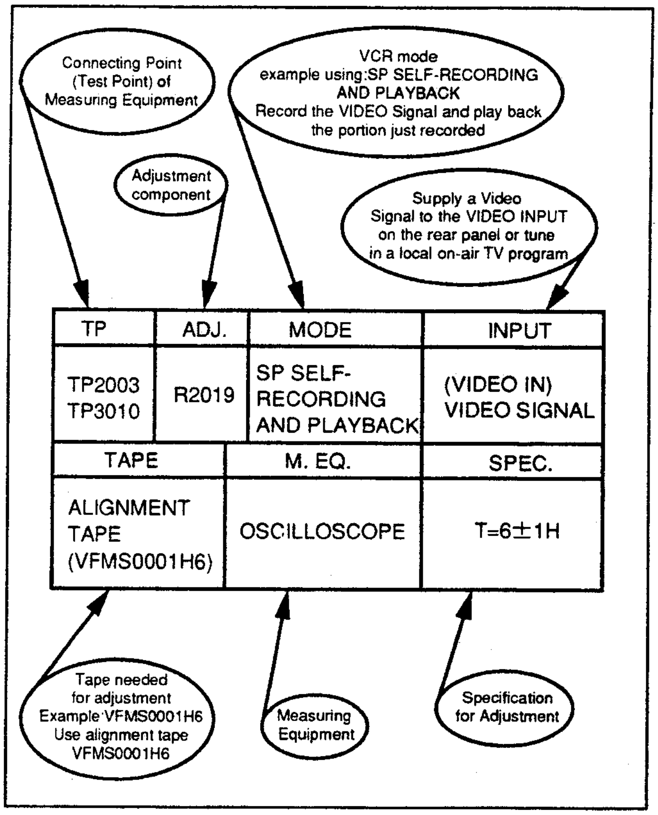
1. Dual-Trace Oscilloscope
   Voltage Range : 0.001~50V/Div.
   Frequency Range : DC~50MHz
   Probes : 10:1, 1:1
2. Signal Generator
   Sinewave : 0~10MHz
3. NTSC Video Pattern Generator
4. Color TV Receiver or Monitor
5. Plastic Tip Driver and Non-Metal Driver
6. Lock Screw Wrench (VFKS0032)
7. Isolation Transformer (Variable)
8. VHS Alignment Tape (VFMS0001H6)
9. AC Millivolt Meter
   Voltage Range : 0~1 Vrms.
10. MTS/SAP Signal Generator
    (TV Multi-Channel Sound Modulator (U.S.A))



Start Counter Reading	0 (0)	0020 ± 8 (008 ± 6)	0135 ± 12 (060 ± 6)	0240 ± 20 (109 ± 10)
Video Audio	Blank Blank	Monoscope 6kHz(MONO)	Color Bars 3kHz(STEREO)	Multi-Burst 1kHz(MONO)

Fig. E1

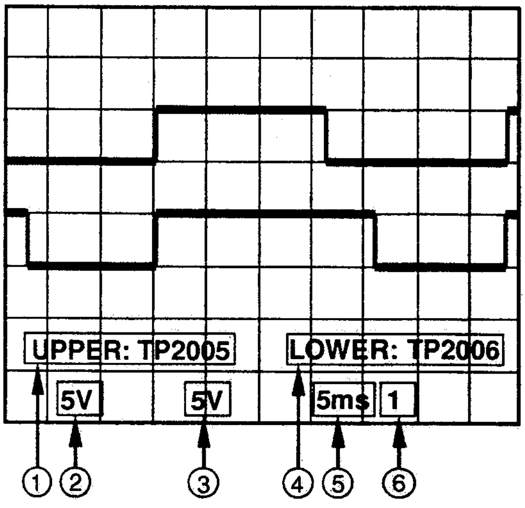
2. HOW TO READ THE ADJUSTMENT PROCEDURES


Connecting Point (Test Point) of Measuring Equipment
VCR mode example using:SP SELF-RECORDING AND PLAYBACK Record the VIDEO Signal and play back the portion just recorded
Adjustment component
Supply a Video Signal to the VIDEO INPUT on the rear panel or tune in a local on-air TV program
Tape needed for adjustment Example VFMS0001H6 Use alignment tape VFMS0001H6
Measuring Equipment
Specification for Adjustment

TP	ADJ.	MODE	INPUT
TP2003 TP3010	R2019	SP SELF-RECORDING AND PLAYBACK	(VIDEO IN) VIDEO SIGNAL

TAPE	M. EQ.	SPEC.
ALIGNMENT TAPE (VFMS0001H6)	OSCILLOSCOPE	T=6±1H

Fig. E2


UPPER: TP2005
LOWER: TP2006
5V
5V
5ms
1
①
②
③
④
⑤
⑥

1. Connecting Point
2. Volts/DIV
3. Volts/DIV
4. Connecting Point
5. Time/DIV
6. Trigger Channel of the Scope

   1 : UPPER
   2 : LOWER

Fig. E3

Caution: Use an Isolation Transformer (Variable)

Because a Hot Chassis Ground is present in the Switched Mode Power Supply Circuit, an Isolation Transformer must be used. Also, in order to have the ability to increase the input voltage slowly, when troubleshooting this type of Power Supply Circuit, a variable Isolation Transformer is required.

3. ADJUSTMENT PROCEDURES

These adjustment procedures consist of the following sections.

1. Servo Section
2. Audio Section
3. Luminance and Chrominance Section

3-1. SERVO SECTION

HEAD SWITCHING POSITION ADJUSTMENT (PG SHIFTER)

Purpose:
Determine the Head Switching Point during Playback.

Symptom of Misadjustment:
May cause Head Switching Noise and/or Vertical Jitter in the picture.

TP	ADJ.	MODE	INPUT
TP3001 TP6205	R6201	SP PLAYBACK	

TAPE	M.EQ.	SPEC.
ALIGNMENT TAPE (VFMS0001H6) COLOR BARS	OSCILLOSCOPE	T=6±1H (0.38±0.06msec)

Note:
TP3001,
TP6205(Model F, G, H, I) : Video Signal Process Section on the Main C.B.A.
TP6205(Model A, B, C, D, E),
R6201 : Servo Section on the Main C.B.A.

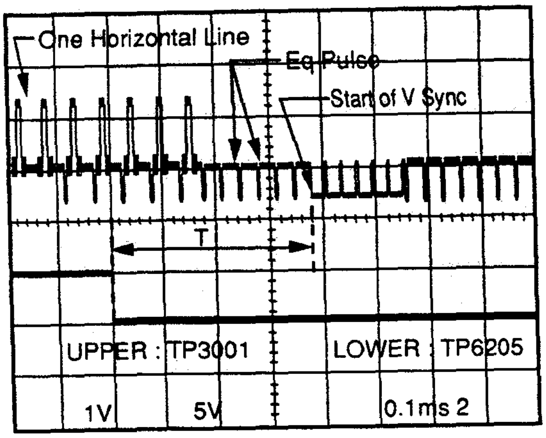


Fig. E4

3-2. AUDIO SECTION

Model : F, G, H, I

Hi-Fi AUDIO SECTION

AUDIO MUTING LEVEL ADJUSTMENT

Purpose :
To eliminate the Hi-Fi Audio function when the FM Carrier level is inadequate.

Symptom of Misadjustment :
Significant noise will be heard in the Audio, or the Unit will not go into the Hi-Fi Audio mode.

(SETUP)
1. Set the Input Select Switch on the Front Panel Unit to LINE mode.
2. Place a jumper between TP6003 on the Video Signal Process Section of the Main C.B.A. and +5V(TP6009) on the System Control Section of the Main C.B.A. to defeat Auto Tracking. Eject the tape and reinsert it again, this will access the Neutral Tracking position.
3. Set the Audio mode to Hi-Fi mode using the remote control.
   1) Press the Menu button to display the Menu screen.
   2) Press the 3 numbered button to display the Set Audio mode screen.
   3) Press the 3 numbered button to select Hi-Fi mode. The Hi-Fi indicator will light on.
   4) Press the Menu button twice to exit the screen.

TP	ADJ.	MODE	INPUT
TP4205	R4205	SP SELF-RECORDING AND PLAYBACK	(AUDIO IN (L,R)) NO SIGNAL USE SHORTED PHONO PLUGS

TAPE	M.EQ.	SPEC.
BLANK TAPE	OSCILLOSCOPE	

Note :
TP4205 : Hi-Fi Section on the Main C.B.A.
R4205 : Hi-Fi Audio C.B.A.

1. Insert a cassette tape and make a recording in the SP Mode.
2. Play back the portion just recorded.
3. Adjust the Tracking Control using IR Wireless Transmitter Unit so that the amplitude of the signal at TP4205 is reduced to 1/3.
4. First adjust R4205 (AUDIO MUTING) until the Hi-Fi indicator turns OFF.
5. Then slowly adjust R4205 (AUDIO MUTING) to the point where the Hi-Fi indicator just turns ON.
6. Confirm that the audio on CH-L and CH-R does not contain any abnormal sounds.

MTS/SAP SECTION

Model : F, G, H, I

INPUT LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
Pin 4 of P9001	R7010	STOP	(ANTENNA INPUT TERMINAL) MONO 300Hz±5Hz 100% Modulating

TAPE	M.EQ.	SPEC.
	AC MILLIVOLT METER MTS/SAP SIGNAL GENERATOR	150 ± 5mVrms or 424 ±15mVp-p

Note :

Pin 4 of P9001 : MTS / SAP C.B.A.
R7010 : Demodulator Section on the Main C.B.A.

1. Connect the RF OUTPUT of the MTS/SAP Signal Generator to the Antenna Input Terminal.
2. Connect the AC Millivolt Meter to Pin 4 of P9001.
3. Adjust R7010 ((MPX) INPUT LEVEL)on the Demodulator section of the Main C.B.A. so that the voltage at Pin 4 of P9001 is 150 ± 5mVrms.

   Note:
   If 100% Modulation in the MTS/SAP signal generator is not available, use the Alternate SPEC, multiplying the SPEC(150 ± 5mVrms) by the Modulation.

Example :
If the Modulation is 30%, the SPEC should be 45 ± 1.5 mVrms (150 ± 5mVrms x 0.3 = 45 ± 1.5mVrms).

3-3. LUMINANCE AND CHROMINANCE SECTION

3-3-1. LOW FREQUENCY NOISE CANCELLER ADJUSTMENT (LNC)

Purpose:
Improve the overall S/N Ratio especially in the Low Frequency Component.

Symptom of Misadjustment:
The S/N Ratio will be lower.

TP	ADJ.	MODE	INPUT
Model : A, B, C, D, E TP3007 TP3008 Model : F, G, H, I TP3007	R3203	SLP SELF-RECORDING AND PLAYBACK	(VIDEO IN) NTSC COLOR BAR (W/WHITE WINDOW)

TAPE	M.EQ.	SPEC.
BLANK TAPE	OSCILLOSCOPE NTSC VIDEO PATTERN GENERATOR	Model : A, B, C, D, E Refer to Fig. E5-1 Model : F, G, H, I Refer to Fig. E5-3

Note:
TP3007,TP3008 : Video Signal Process Section on the Main C.B.A.

1. Insert a Cassette Tape and record the NTSC Color Bar Signal in SLP Mode.
2. Play back the SLP portion just recorded.
3. Set oscilloscope to the CHOP Mode.
4. Model : A, B, C, D, E
   Adjust R3203 (LNC) so that the A level at TP3007 and TP3008 are equal.

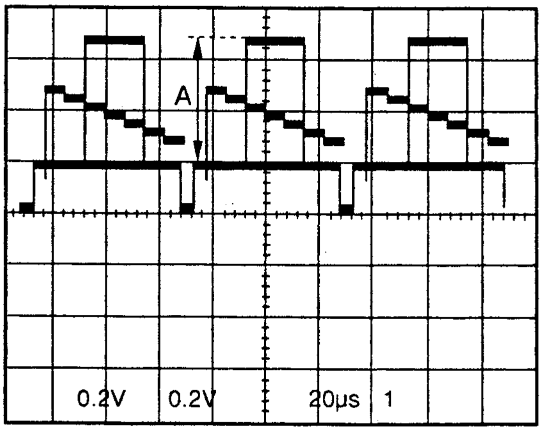


Fig. E5-1

Model : F, G, H, I

Adjust R3203 (LNC) so that the width (W) of signal is at a minimum as shown in Fig. E5-3.

Note :
Ignore the sync pattern when adjusting.

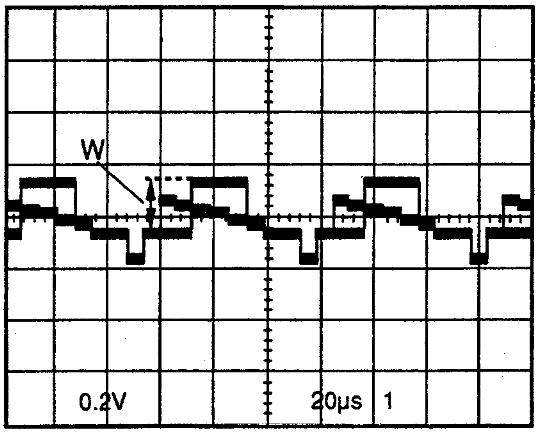


Fig. E5-2 (before adjustment)

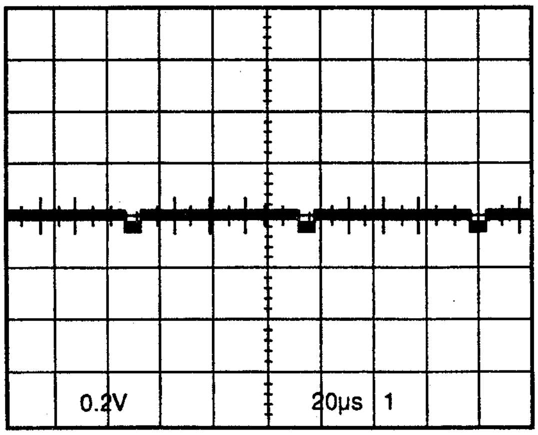


Fig. E5-3 (after adjustment)

3-3-2. E-E LEVEL ADJUSTMENT

Purpose:
Set the optimum E-E Level of the Luminance Component.

Symptom of Misadjustment:
The picture is sometimes too dark or too bright.

Model : A, B, C, D, E

TP	ADJ.	MODE	INPUT
TP3001	—	STOP	(VIDEO IN) NTSC COLOR BAR (W/WHITE WINDOW)

TAPE	M.EQ.	SPEC.
/	OSCILLOSCOPE NTSC VIDEO PATTERN GENERATOR	A=2.0 ± 0.1Vp-p

Note:
TP3001 :Video Signal Process Section on the Main C.B.A.

Confirm that A level at TP3001 is 2.0 ± 0.1Vp-p.
If not, proceed as follows.

(i) A is greater than spec.

Place the jumper on J3021 (when the foil path (1) has been cut)
or
Cut the foil path (2)
or
Remove J3022 (when used).

(ii) A is less than spec.

Place the jumper on J3022 (when the foil path (2) has been cut)
or
Cut the foil path (1)
or
Remove J3021 (when used).

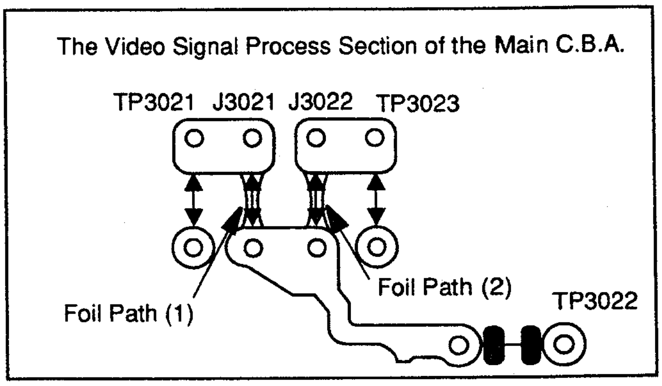

The Video Signal Process Section of the Main C.B.A.
TP3021
J3021
J3022
TP3023
Foil Path (1)
Foil Path (2)
TP3022

Fig. E6-1

Model : F, G, H, I

TP	ADJ.	MODE	INPUT
TP3001	R3025	STOP	(VIDEO IN) NTSC COLOR BAR (W/WHITE WINDOW)

TAPE	M.EQ.	SPEC.
	OSCILLOSCOPE NTSC VIDEO PATTERN GENERATOR	A=2.0 ± 0.1Vp-p

Note:
TP3001, R3025 :Video Signal Process Section on the Main C.B.A.

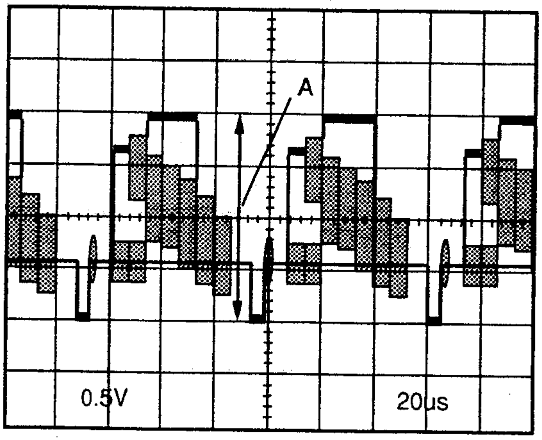


Fig. E6-2

3-3-3. SYNC TIP FREQUENCY AND DEVIATION ADJUSTMENT

Purpose:
To maintain the recording interchangeability by adjusting the Sync Tip Frequency and Deviation.

Symptom of Misadjustment:
Record interchangeability is inadequate.

(SET UP)

1. Connect a signal generator (sinewave) to TP3006 on the Video Signal Process Section of the Main C.B.A. through a resistor (1KΩ).

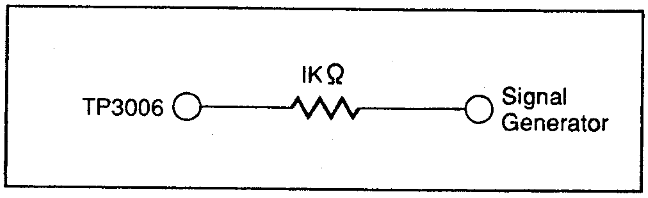


Fig. E7-1

2. Also, connect the oscilloscope CH1 to TP3006.
3. Connect the oscilloscope CH2 to TP3001 on the Video Signal Process Section of the Main C.B.A.
4. Make sure that R3006(REC VIDEO LEVEL) on the Video Signal Process Section of the Main C.B.A. is not turned fully clockwise.

A-1. Sync Tip Frequency adjustment

TP	ADJ.	MODE	INPUT
TP3006	R3016	Model : A, B, C, D, E SP REC Model : F, G, H, I SLP REC	(VIDEO IN) NTSC COLOR BAR (W/WHITE WINDOW)

TAPE	M.EQ.	SPEC.
BLANK TAPE	OSCILLOSCOPE NTSC VIDEO PATTERN GENERATOR SIGNAL GENERATOR	Beat is at minimum.

Note:
TP3006, R3016 : Video Signal Process Section on the Main C.B.A.

1. Set the frequency and the output level of the signal generator as follows;

Frequency : 3.5MHz
Output level : 150mVp-p

2. Adjust R3016(SYNC TIP FREQ) so that the beat is at minimum as shown in Fig. E7-2.

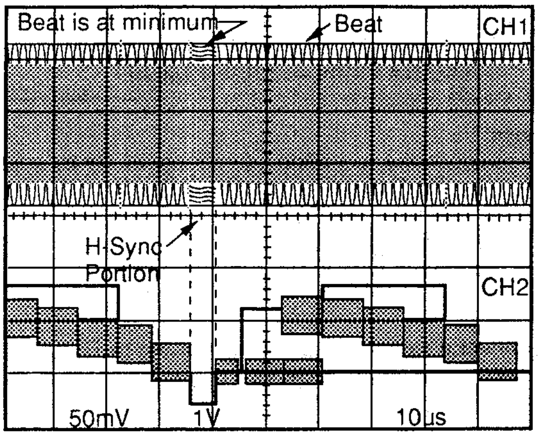


Fig. E7-2

A-2. Deviation adjustment

TP	ADJ.	MODE	INPUT
TP3006	R3010	Model : A, B, C, D, E SP REC Model : F, G, H, I SLP REC	(VIDEO IN) NTSC COLOR BAR (W/WHITE WINDOW)

TAPE	M.EQ.	SPEC.
BLANK TAPE	OSCILLOSCOPE NTSC VIDEO PATTERN GENERATOR SIGNAL GENERATOR	Beat is at minimum.

Note:

TP3006, R3010 : Video Signal Process Section on the Main C.B.A.

1. Set the frequency and the output level of the signal generator as follows;

   Frequency : 4.5MHz
   Output level : 150mVp-p

2. Adjust R3010(DEVIATION) so that the beat is at minimum as shown in Fig. E7-3.

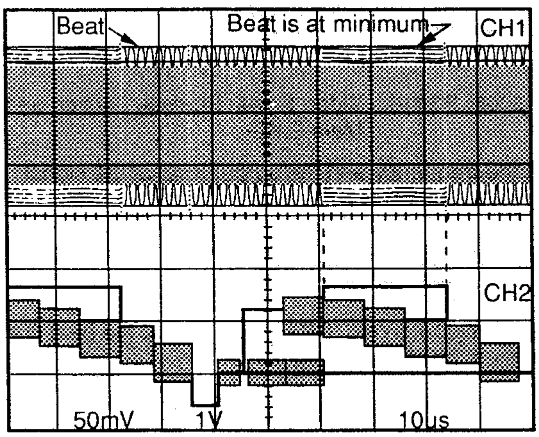


Fig. E7-3

3. Set the frequency of the signal generator to 3.5MHz again. And confirm that the beat is at minimum as shown in Fig. E7-2. If not, readjust R3016(SYNC TIP FREQ).

3-3-4. WHITE AND DARK CLIP ADJUSTMENT

Model : F, G, H, I

Purpose :

Set the optimum overshoot level to avoid over modulation.

Symptom of Misadjustment :

Excessive modulation will cause the picture to break when played back.

If the overshoot level is below the specified level, the white and black border will be dimmed.

TP	ADJ.	MODE	INPUT
TP3003	R3007	STOP	(VIDEO IN) NTSC COLOR BAR (W/WHITE WINDOW)

TAPE	M.EQ.	SPEC.
	OSCILLOSCOPE	A=200 ± 10%

Note:

TP3003, R3007 : Video Signal Process Section on the Main C.B.A.

Adjust R3007 (WHITE CLIP) so that the level (A) is 200± 10%.

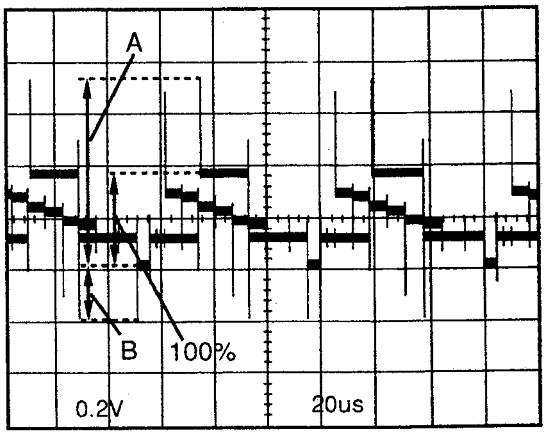


Fig. E8

Note:

Confirm that the level (B) is 60± 10%.

3-3-5. RECORDING CURRENT ADJUSTMENT

A-1. REC VIDEO LEVEL ADJUSTMENT

Purpose :

Set the optimum Record Luminance Level.

Symptom of Misadjustment :

If the record Luma Level is too high, Video may over load. If the Level is too low, the S/N Ratio deteriorates.

TP	ADJ.	MODE	INPUT
TP3006	R3006	SLP REC	(VIDEO IN) NTSC COLOR BAR (W/WHITE WINDOW)

TAPE	M.EQ.	SPEC.
BLANK TAPE	OSCILLOSCOPE NTSC VIDEO PATTERN GENERATOR	Model : A, B, C, D, E A=190 ± 7 mVp-p Model : F, G, H, I A=195 ± 7 mVp-p

Note:

TP3006, R3006 : Video Signal Process Section on the Main C.B.A.

- Use the 10:1 probe when adjusting.

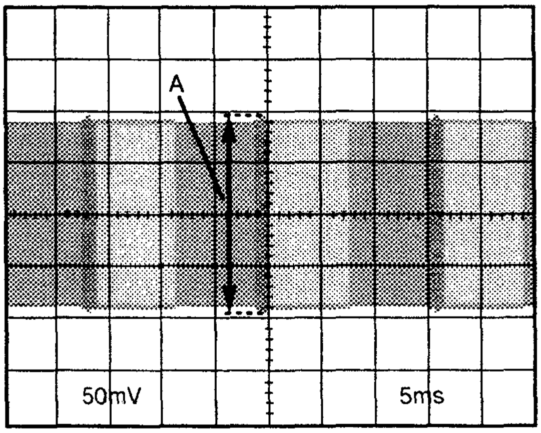


Fig. E9-1

A-2. REC CHROMA LEVEL ADJUSTMENT

Purpose:

Set the optimum Record Chroma Level.

Symptom of Misadjustment :

If the Record Chroma Level is too high, Beats may be seen in the picture. If the Level is too low, the Color may be degraded.

TP	ADJ.	MODE	INPUT
TP3010	Model : A, B, C, D, E R3039 Model : F, G, H, I R3015	SLP REC	(VIDEO IN) NTSC COLOR BAR (W/WHITE WINDOW)

TAPE	M.EQ.	SPEC.
BLANK TAPE	OSCILLOSCOPE NTSC VIDEO PATTERN GENERATOR	Model : A, B, C, D, E B=210 ± 7mVp-p Model : F, G, H, I B=270 ± 7mVp-p

Note:

TP3010, R3039, R3015 : Video Signal Process Section on the Main C.B.A.

- Use the 10:1 probe when adjusting.

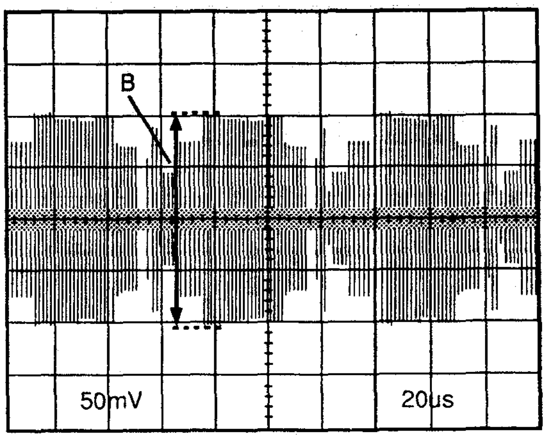


Fig. E9-2

3-3-6. PLAYBACK LEVEL ADJUSTMENT

Purpose:
To align the Playback Level of the Video Signal with the Recording (E-E) Level.

Symptom of Misadjustment:
Playback interchangeability is inadequate.

TP	ADJ.	MODE	INPUT
TP3001	R3024	SP SELF-RECORDING AND PLAYBACK	(VIDEO IN) NTSC COLOR BAR (W/WHITE WINDOW)

TAPE	M.EQ.	SPEC.
BLANK TAPE	OSCILLOSCOPE NTSC VIDEO PATTERN GENERATOR	A=2.00 ± 0.15Vp-p

Note:
TP3001, R3024 : Video Signal Process Section on the Main C.B.A.

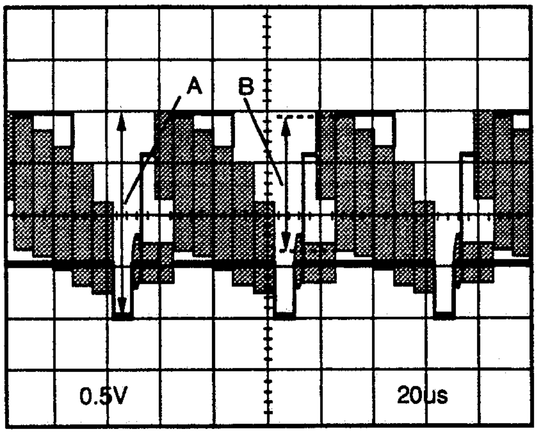
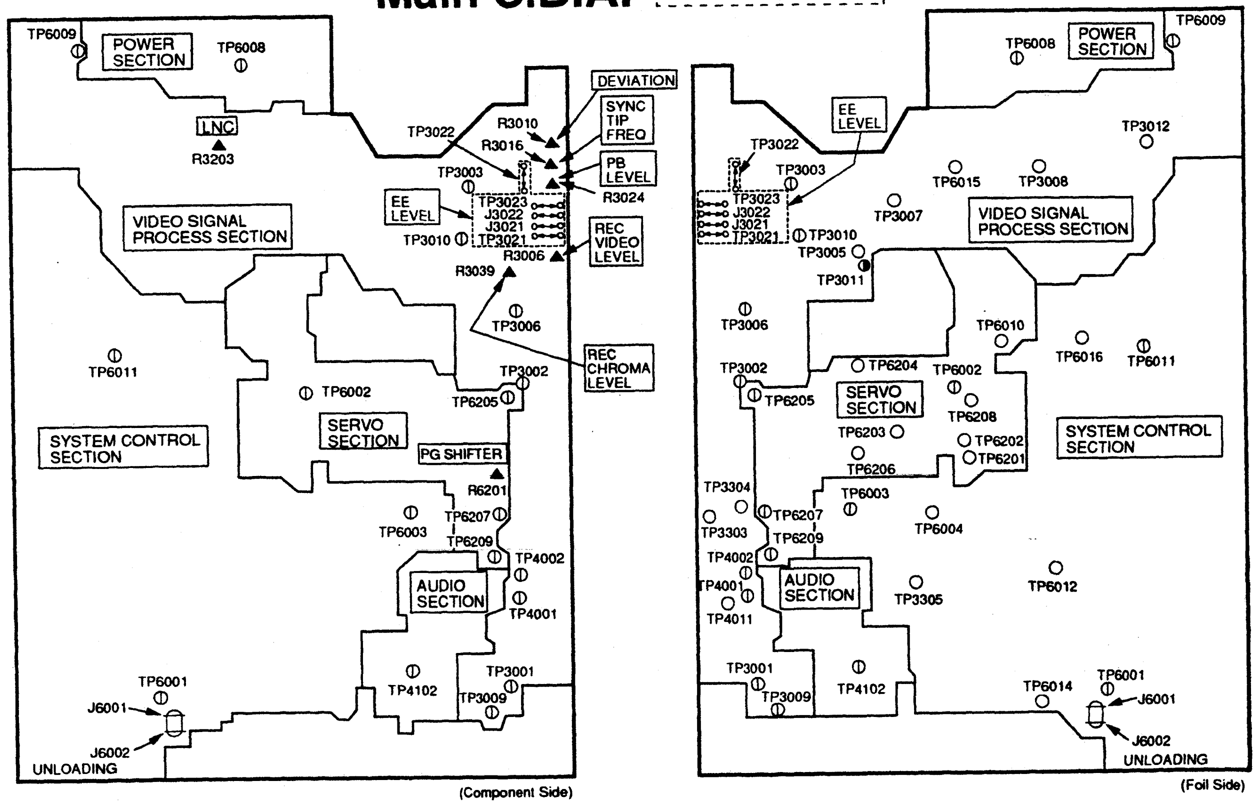


Fig. E10

Note:
Confirm that the Cyan level (B) is 1.26 ± 0.3Vp-p.

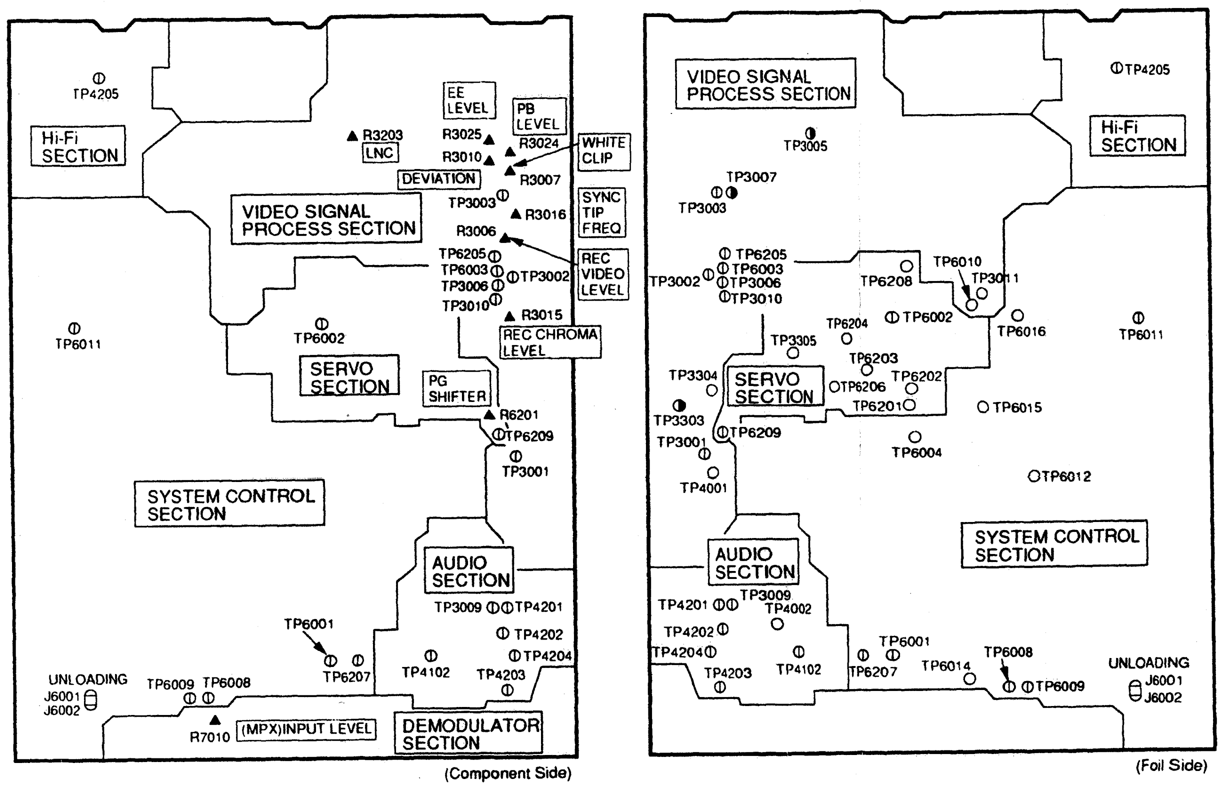
D. LOCATION OF TEST POINTS AND ADJUSTMENT POINTS

Main C.B.A. Model : A, B, C, D



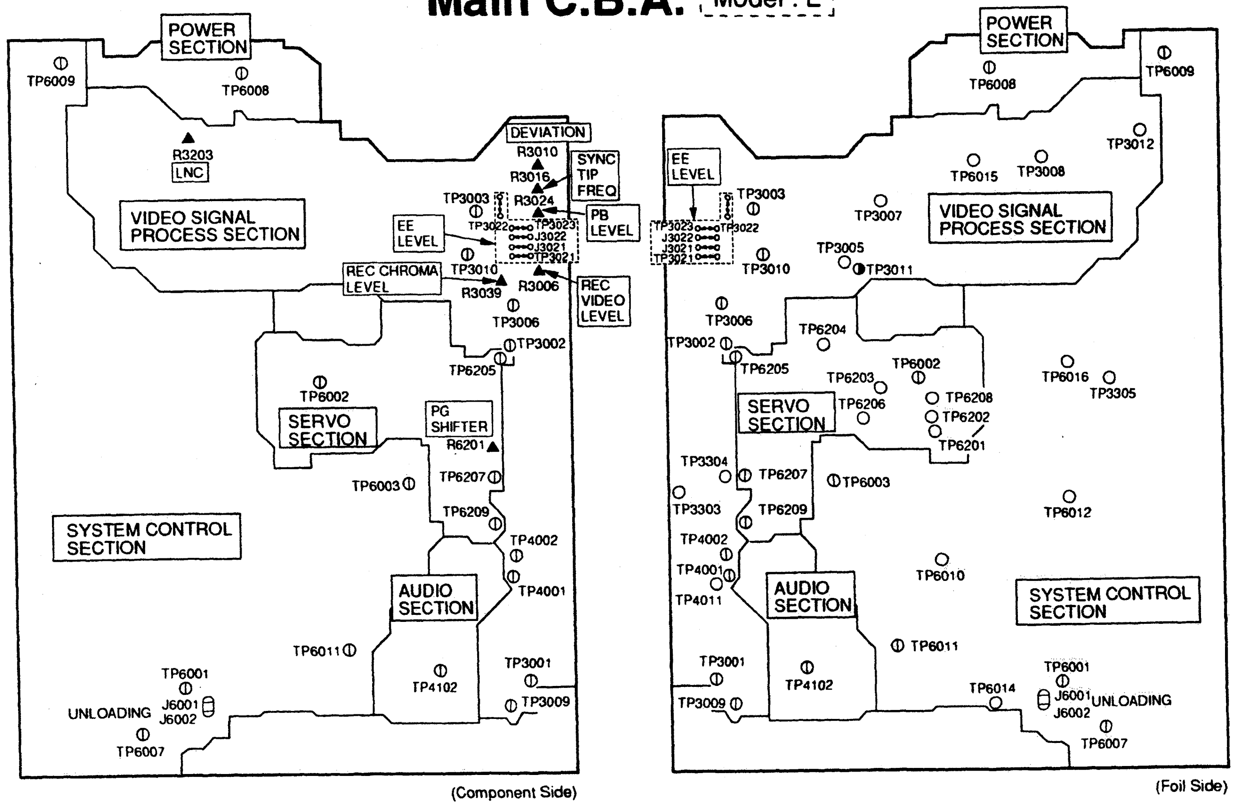
TP6009
POWER SECTION
TP6008
LNC
R3203
TP3022
R3010
R3016
TP3003
DEVIATION
SYNC TIP FREQ
PB LEVEL
R3024
EE LEVEL
TP3023
J3022
J3021
TP3021
TP3010
R3006
REC VIDEO LEVEL
R3039
VIDEO SIGNAL PROCESS SECTION
TP3006
REC CHROMA LEVEL
TP6011
TP3002
TP6002
TP6205
SERVO SECTION
SYSTEM CONTROL SECTION
PG SHIFTER
R6201
TP6003
TP6207
TP6209
TP4002
AUDIO SECTION
TP4001
TP3001
TP4102
TP3009
TP6001
J6001
J6002
UNLOADING
(Component Side)
TP3012
TP3005
TP3011
TP3007
TP6015
TP3008
TP6010
TP6016
TP6204
TP6203
TP6206
TP6208
TP6202
TP6201
TP3304
TP3303
TP4011
TP3305
TP6004
TP6012
TP6014
(Foil Side)

Main C.B.A. Model : F, G, H



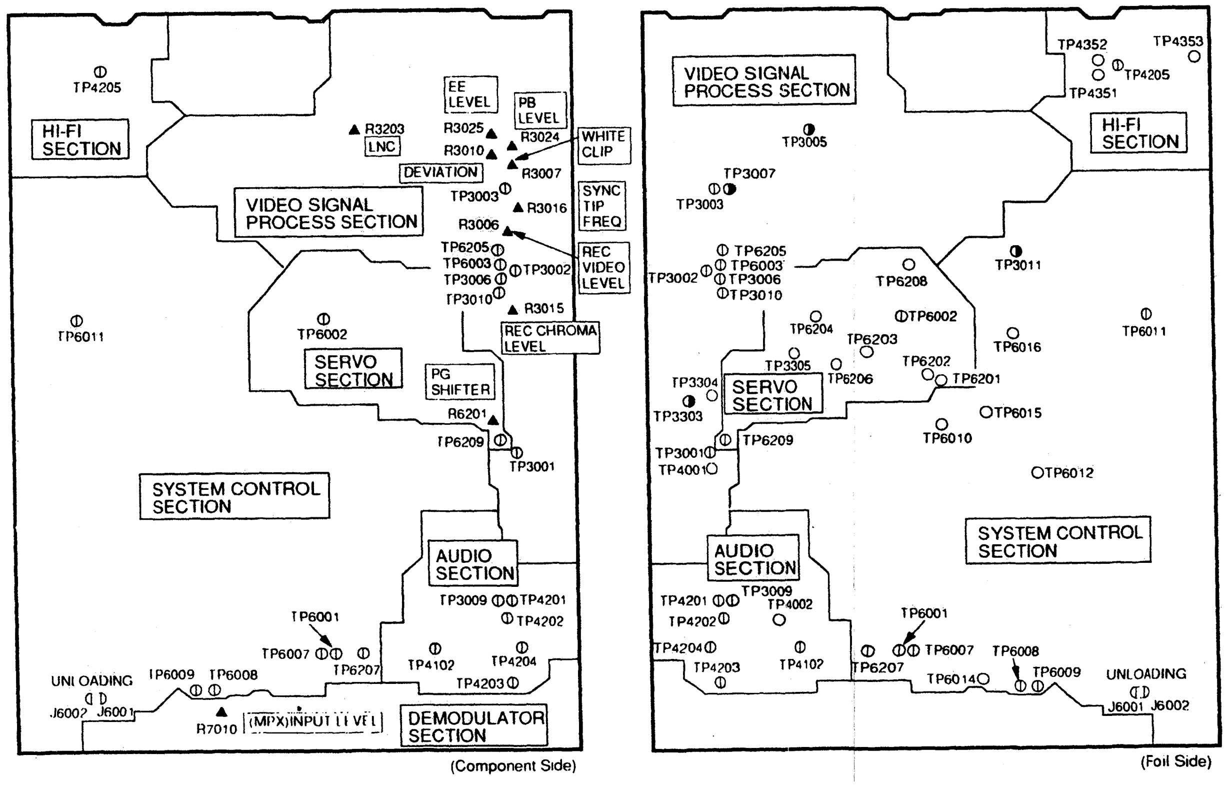
TP4205
Hi-Fi SECTION
EE LEVEL
PB LEVEL
R3203
LNC
R3025
R3024
WHITE CLIP
R3010
DEVIATION
R3007
VIDEO SIGNAL PROCESS SECTION
TP3003
R3016
SYNC TIP FREQ
R3006
TP6205
TP6003
TP3006
TP3002
REC VIDEO LEVEL
TP3010
R3015
REC CHROMA LEVEL
TP6011
TP6002
SERVO SECTION
PG SHIFTER
R6201
TP6209
TP3001
SYSTEM CONTROL SECTION
AUDIO SECTION
TP3009
TP4201
TP4202
TP4204
TP6001
TP6207
TP4102
TP4203
UNLOADING
J6001
J6002
TP6009
TP6008
R7010
(MPX)INPUT LEVEL
DEMODULATOR SECTION
(Component Side)
TP3005
TP3007
TP6208
TP6010
TP3011
TP6204
TP6016
TP3305
TP6203
TP3304
TP6206
TP6202
TP6201
TP3303
TP6015
TP6004
TP4001
TP6012
TP6014
(Foil Side)

Main C.B.A. Model : E



POWER SECTION
TP6009
TP6008
R3203
LNC
DEVIATION
R3010
R3016
SYNC TIP FREQ
TP3003
R3024
PB LEVEL
EE LEVEL
VIDEO SIGNAL PROCESS SECTION
TP3023
J3022
J3021
TP3021
REC CHROMA LEVEL
TP3010
R3039
R3006
REC VIDEO LEVEL
TP3006
TP3002
TP6205
TP6002
SERVO SECTION
PG SHIFTER
R6201
TP6003
TP6207
TP6209
TP4002
SYSTEM CONTROL SECTION
AUDIO SECTION
TP4001
TP6011
TP3001
TP4102
TP3009
TP6001
UNLOADING
J6001
J6002
TP6007
(Component Side)
TP3012
TP6015
TP3008
TP3007
TP3022
TP3005
TP3011
TP6204
TP6016
TP3305
TP6203
TP6206
TP6208
TP6202
TP6201
TP3304
TP3303
TP6012
TP6010
TP4011
TP6014
(Foil Side)

Main C.B.A. Model : I



TP4205
HI-FI SECTION
EE LEVEL
PB LEVEL
R3203
LNC
R3025
R3024
WHITE CLIP
R3010
DEVIATION
R3007
VIDEO SIGNAL PROCESS SECTION
TP3003
R3016
SYNC TIP FREQ
R3006
TP6205
TP6003
TP3006
TP3002
REC VIDEO LEVEL
TP3010
R3015
REC CHROMA LEVEL
TP6011
TP6002
SERVO SECTION
PG SHIFTER
R6201
TP6209
TP3001
SYSTEM CONTROL SECTION
AUDIO SECTION
TP3009
TP4201
TP4202
TP6001
TP6007
TP6707
TP4102
TP4204
TP4203
UNLOADING
TP6009
TP6008
J6002
J6001
R7010
(MPX)INPUT LEVEL
DEMODULATOR SECTION
(Component Side)
TP4352
TP4353
TP4351
TP3005
TP3007
TP6208
TP3011
TP6204
TP6203
TP6016
TP3305
TP6206
TP6202
TP6201
TP3304
TP3303
TP6015
TP6010
TP4001
TP6012
TP6207
TP6014
(Foil Side)

EADED COMPONENTS OCATION CHART FOR AIN C.B.A.

Model : A, B, C, D, E

TP ◑	Component Lead (Foil Side)
TP3011	W3042

Model : F, G, H

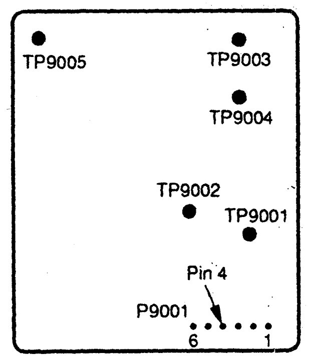
TP ◑	Component Lead (Foil Side)
TP3005	J3005
TP3007	C3058(-)
TP3303	C3302(+)

Model : I

TP ◑	Component Lead (Foil Side)
TP3005	J3005
TP3007	C3058(-)
TP3011	W6024
TP3303	C3302(+)

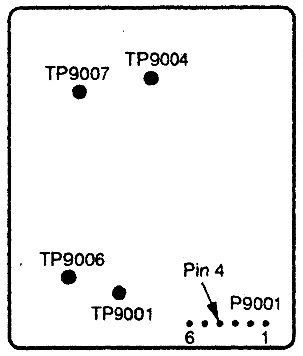
MTS/SAP C.B.A.

Model : G, H, I


TP9005
TP9003
TP9004
TP9002
TP9001
Pin 4
P9001
6
1

(Foil Side)

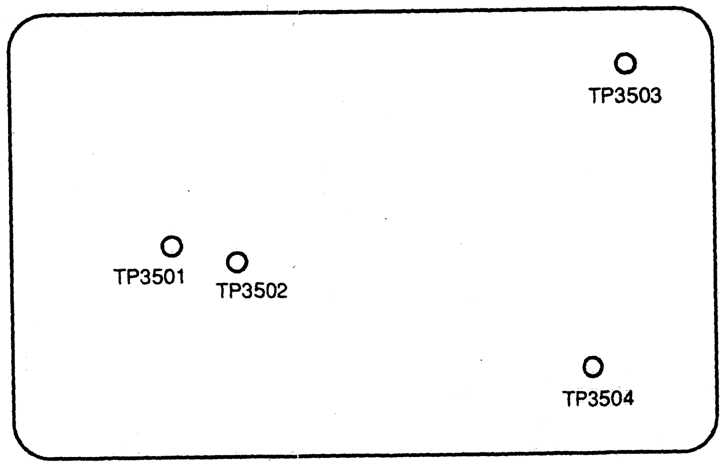
Model : F


TP9007
TP9004
TP9006
Pin 4
TP9001
P9001
6
1

(Foil Side)

Head Amp Ass'y

Model : A, B, C, D, E


TP3503
TP3501
TP3502
TP3504

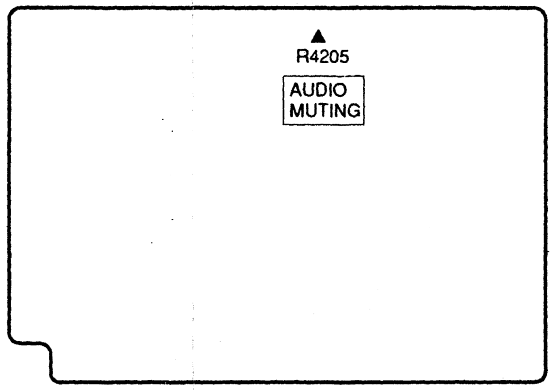
(Foil Side)

Test Point Information

- ⦶ Test Point with a jumper wire across a hole in the P.C.B.
- ○ Test Point with no Test Pin.
- ● Test Point with a Test Pin.
- ◑ Test Point with a component lead on the Foil Side.

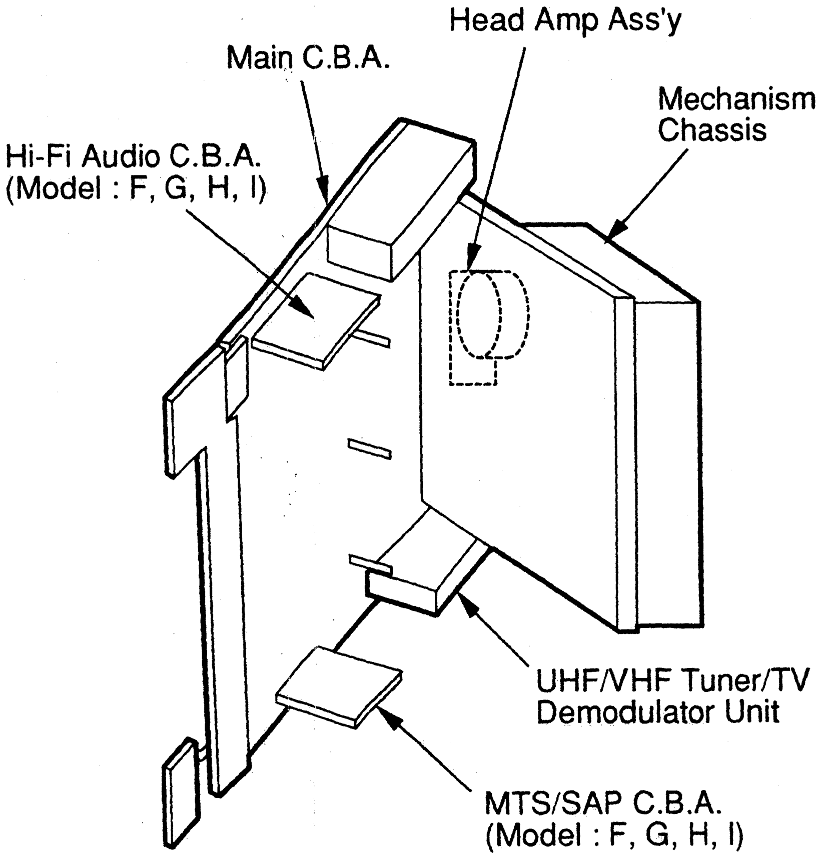
Hi-Fi Audio C.B.A.

Model : F, G, H, I


R4205
AUDIO MUTING

(Component Side)

Mechanism Chassis Unit

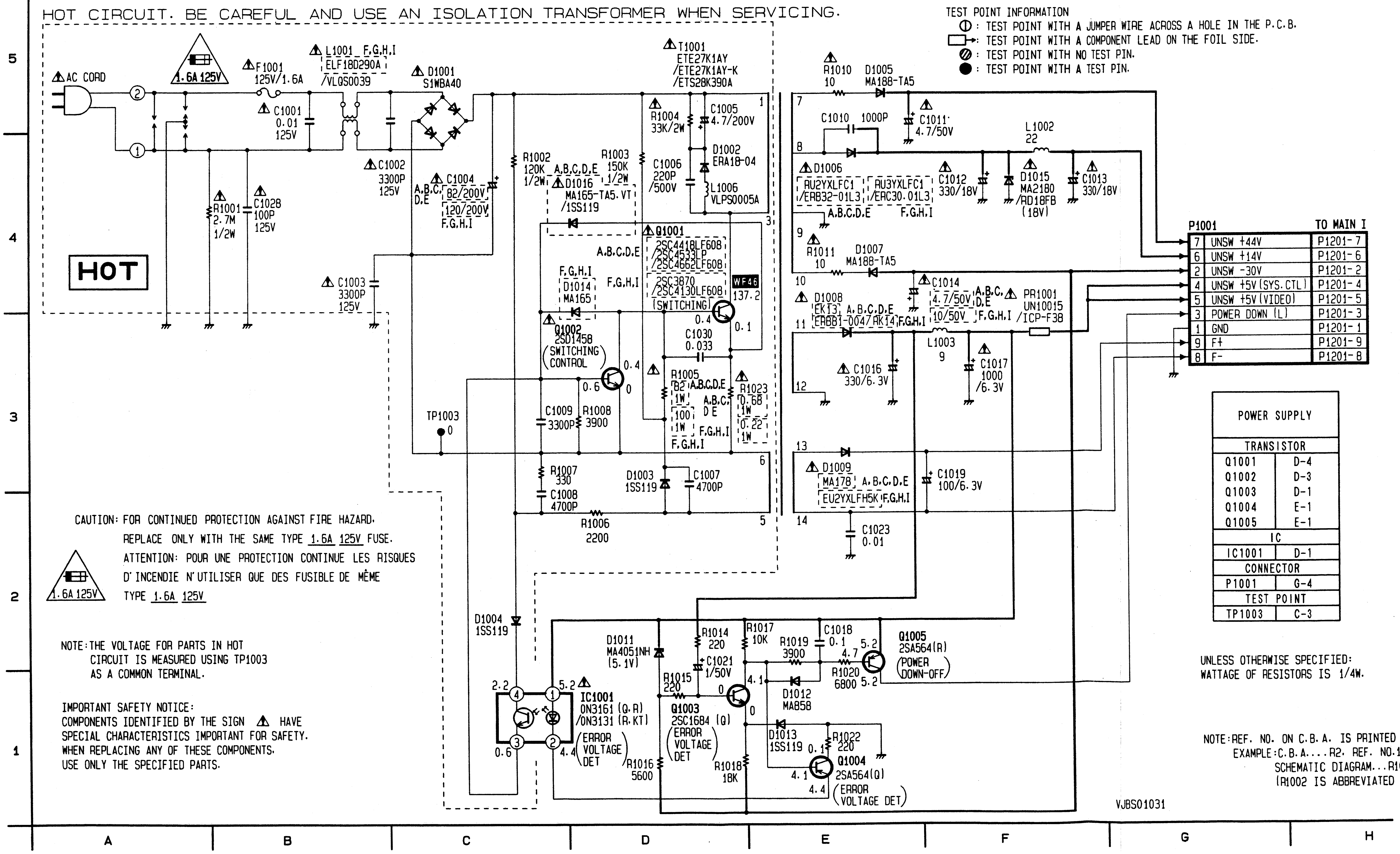

Head Amp Ass'y
Main C.B.A.
Mechanism Chassis
Hi-Fi Audio C.B.A. (Model : F, G, H, I)
UHF/VHF Tuner/TV Demodulator Unit
MTS/SAP C.B.A. (Model : F, G, H, I)

III SCHEMATIC DIAGRAMS

POWER SUPPLY SCHEMATIC DIAGRAM

NOTE:
1. DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST. AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.
2. TO MAINTAIN ORIGINAL FUNCTION AND RELIABILITY OF REPAIRED UNITS, USE ONLY ORIGINAL REPLACEMENT PARTS WHICH ARE LISTED WITH THEIR PART NUMBERS IN THE PARTS LIST SECTION OF THE SERVICE MANUAL.

TEST POINT INFORMATION
- ⦶ : TEST POINT WITH A JUMPER WIRE ACROSS A HOLE IN THE P.C.B.
- ▭→ : TEST POINT WITH A COMPONENT LEAD ON THE FOIL SIDE.
- ⊘ : TEST POINT WITH NO TEST PIN.
- ● : TEST POINT WITH A TEST PIN.


HOT CIRCUIT. BE CAREFUL AND USE AN ISOLATION TRANSFORMER WHEN SERVICING.
5
4
3
2
1
A
B
C
D
E
F
G
H
HOT
AC CORD
1.6A 125V
F1001 125V/1.6A
L1001 F.G.H.I ELF18D290A /VLQS0039
C1001 0.01 125V
D1001 S1WBA40
C1002 3300P 125V
C1004 A.B.C.D.E 82/200V 120/200V F.G.H.I
R1001 2.7M 1/2W
C1028 100P 125V
C1003 3300P 125V
R1002 120K 1/2W
A.B.C.D.E
D1016 MA165-TA5.VT /1SS119
R1003 150K 1/2W
T1001 ETE27K1AY /ETE27K1AY-K /ETS28K390A
R1004 33K/2W
C1005 4.7/200V
D1002 ERA18-04
C1006 220P /500V
L1006 VLPS0005A
Q1001 A.B.C.D.E 2SC4418LF608 /2SC4533LP /2SC4662LF608
F.G.H.I 2SC3870 /2SC4130LF608 (SWITCHING)
WF46 137.2
0.4
0.1
C1030 0.033
F.G.H.I D1014 MA165
Q1002 2SD1458 (SWITCHING CONTROL)
0.4
0.6
0
C1009 3300P
R1008 3900
R1005 82 1W A.B.C.D.E 100 1W F.G.H.I
R1023 A.B.C.D.E 0.68 1W 0.22 1W F.G.H.I
R1007 330
C1008 4700P
D1003 1SS119
C1007 4700P
R1006 2200
TP1003 0
1
3
6
5
7
8
9
10
11
12
13
14
R1010 10
D1005 MA188-TA5
C1010 1000P
C1011 4.7/50V
L1002 22
D1006 RU2YXLFC1 /ERB32-01L3 A.B.C.D.E RU3YXLFC1 /ERC30.01L3 F.G.H.I
C1012 330/18V
D1015 MA2180 /RD18FB (18V)
C1013 330/18V
R1011 10
D1007 MA188-TA5
C1014 4.7/50V A.B.C.D.E 10/50V F.G.H.I
PR1001 UN10015 /ICP-F38
D1008 EK13 A.B.C.D.E ERB81-0047/RK14 F.G.H.I
L1003 9
C1016 330/6.3V
C1017 1000 /6.3V
D1009 MA178 A.B.C.D.E EU2YXLFH5K F.G.H.I
C1019 100/6.3V
C1023 0.01
P1001
TO MAIN I
7 UNSW +44V P1201-7
6 UNSW +14V P1201-6
2 UNSW -30V P1201-2
4 UNSW +5V (SYS.CTL) P1201-4
5 UNSW +5V (VIDEO) P1201-5
3 POWER DOWN (L) P1201-3
1 GND P1201-1
9 F+ P1201-9
8 F- P1201-8
D1004 1SS119
IC1001 0N3161 (Q.R) /0N3131 (R.KT) (ERROR VOLTAGE DET)
2.2
5.2
0.6
4.4
D1011 MA4051NH (5.1V)
R1016 5600
R1014 220
C1021 1/50V
R1015 220
Q1003 2SC1684 (Q) (ERROR VOLTAGE DET)
0
R1018 18K
R1017 10K
R1019 3900
C1018 0.1
4.7
R1020 6800
5.2
Q1005 2SA564(R) (POWER DOWN-OFF)
4.1
D1012 MA858
D1013 1SS119
0.1
R1022 220
Q1004 2SA564(Q) (ERROR VOLTAGE DET)
4.1
4.4
VJBS01031

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH THE SAME TYPE 1.6A 125V FUSE.
ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQUES D'INCENDIE N'UTILISER QUE DES FUSIBLE DE MÊME TYPE 1.6A 125V

1.6A 125V

NOTE: THE VOLTAGE FOR PARTS IN HOT CIRCUIT IS MEASURED USING TP1003 AS A COMMON TERMINAL.

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

POWER SUPPLY	
TRANSISTOR	
Q1001	D-4
Q1002	D-3
Q1003	D-1
Q1004	E-1
Q1005	E-1
IC	
IC1001	D-1
CONNECTOR	
P1001	G-4
TEST POINT	
TP1003	C-3

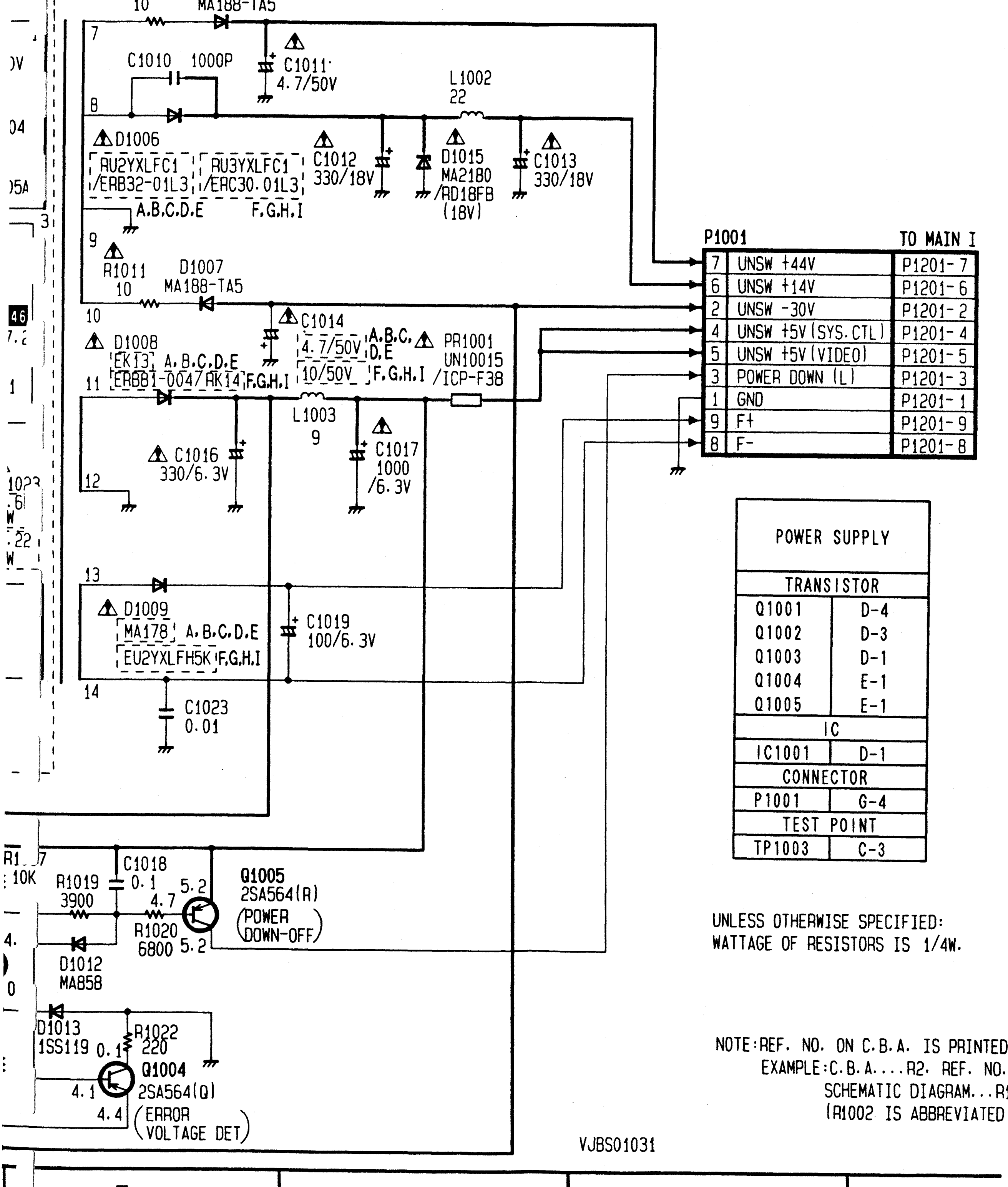
UNLESS OTHERWISE SPECIFIED:
WATTAGE OF RESISTORS IS 1/4W.

NOTE: REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE: C.B.A....R2. REF. NO.1000 SERIES
SCHEMATIC DIAGRAM...R1002
(R1002 IS ABBREVIATED TO R2.)

NO JSE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN
THE PARTS LIST. AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.
MAI TAIN ORIGINAL FUNCTION AND RELIABILITY OF REPAIRED UNITS. USE ONLY ORIGINAL REPLACEMENT PARTS
CH RE LISTED WITH THEIR PART NUMBERS IN THE PARTS LIST SECTION OF THE SERVICE MANUAL.

ERVICING.

TEST POINT INFORMATION
⦶ : TEST POINT WITH A JUMPER WIRE ACROSS A HOLE IN THE P.C.B.
▭→ : TEST POINT WITH A COMPONENT LEAD ON THE FOIL SIDE.
⊘ : TEST POINT WITH NO TEST PIN.
● : TEST POINT WITH A TEST PIN.


R1010
10
D1005
MA188-TA5
C1010 1000P
C1011
4.7/50V
L1002
22
D1006
RU2YXLFC1
/ERB32-01L3
RU3YXLFC1
/ERC30.01L3
A.B.C.D.E
F.G.H.I
C1012
330/18V
D1015
MA2180
/RD18FB
(18V)
C1013
330/18V
R1011
10
D1007
MA188-TA5
C1014
4.7/50V
10/50V
A.B.C.
D.E
F.G.H.I
PR1001
UN10015
/ICP-F38
D1008
EK13
ERB81-004
RK14
A.B.C.D.E
F.G.H.I
L1003
9
C1016
330/6.3V
C1017
1000
/6.3V
D1009
MA178
EU2YXLFH5K
A.B.C.D.E
F.G.H.I
C1019
100/6.3V
C1023
0.01
7
8
9
10
11
12
13
14
P1001
TO MAIN I
7 UNSW +44V P1201-7
6 UNSW +14V P1201-6
2 UNSW -30V P1201-2
4 UNSW +5V(SYS.CTL) P1201-4
5 UNSW +5V(VIDEO) P1201-5
3 POWER DOWN (L) P1201-3
1 GND P1201-1
9 F+ P1201-9
8 F- P1201-8
C1018
0.1
R1019
3900
5.2
4.7
R1020
6800
5.2
Q1005
2SA564(R)
(POWER DOWN-OFF)
D1012
MA858
D1013
1SS119
R1022
220
0.1
Q1004
2SA564(Q)
4.1
4.4
(ERROR VOLTAGE DET)
R1
10K
E
F
G
H

POWER SUPPLY	
TRANSISTOR	
Q1001	D-4
Q1002	D-3
Q1003	D-1
Q1004	E-1
Q1005	E-1
IC	
IC1001	D-1
CONNECTOR	
P1001	G-4
TEST POINT	
TP1003	C-3

UNLESS OTHERWISE SPECIFIED:
WATTAGE OF RESISTORS IS 1/4W.

NOTE: REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE: C.B.A.... R2. REF. NO. 1000 SERIES.
SCHEMATIC DIAGRAM... R1002
(R1002 IS ABBREVIATED TO R2.)

VJBS01031

SERVICE CAUTION

SERVICE PROCEDURE FOR POWER SUPPLY ASS'Y

1. CHECK VOLTAGE AT PINS OF POWER SUPPLY ASS'Y WHILE IT IS STILL ATTACHED TO THE MAIN C.B.A. (SEE FIG-1)
2. REMOVE THE POWER SUPPLY ASS'Y FROM THE MAIN C.B.A.
3. SHORT CHECK AT TERMINAL USED FOR CONNECTING POWER SUPPLY ON MAIN C.B.A. (SEE FIG-2)
4. REPAIR THE MAIN C.B.A.
5. REMOVE THE SHIELD CASE FROM THE POWER SUPPLY ASS'Y AND REINSTALL ON THE MAIN C.B.A. FOR REPAIR.

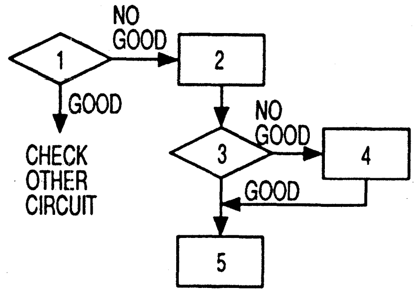

1
NO GOOD
2
GOOD
CHECK OTHER CIRCUIT
NO GOOD
3
4
GOOD
5

FIG-1
VOLTAGES IN STOP MODE UNDER NORMAL CONDITIONS

PIN NO.	VOLTAGE
1	0V
2	-30.7V
3	5.2V
4	5.2V
5	5.2V
6	14.5V
7	44.5V
8	-25.0V
9	-20.4V

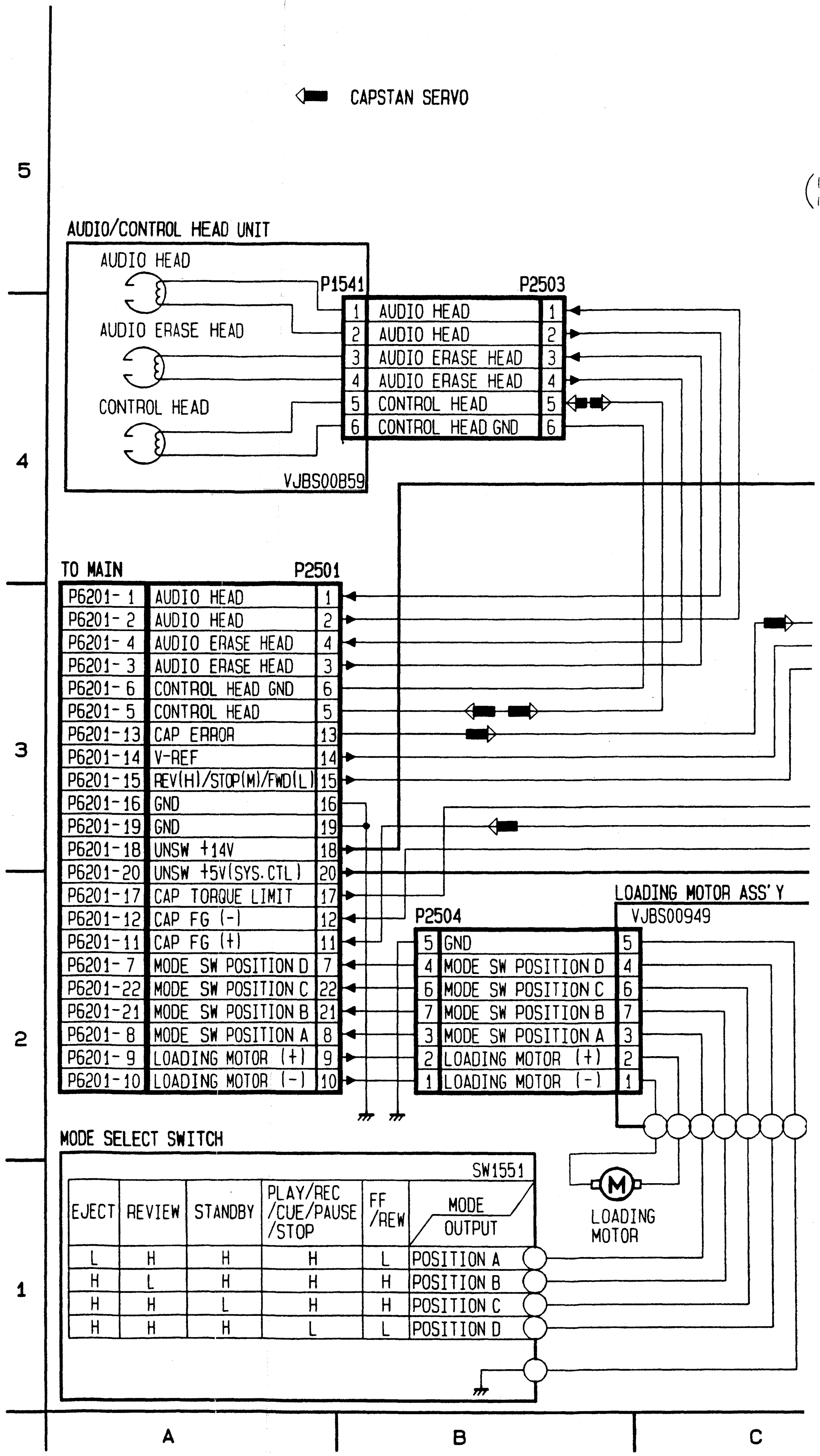
NOTE:
THE VOLTAGES OF THIS TABLE ARE APPROX.

FIG-2
RESISTANCE UNDER NORMAL CONDITIONS.

PIN NO.	RESISTANCE
1	-----
2	MORE THAN 5KΩ
3	MORE THAN 500Ω
4	MORE THAN 25Ω
5	MORE THAN 25Ω
6	MORE THAN 30Ω
7	MORE THAN 500Ω
8	MORE THAN 1KΩ
9	MORE THAN 1KΩ

NOTE:
1. PIN 1 OF THE TERMINALS SHOULD BE GROUND IN THIS MEASUREMENT.
2. RESISTANCES IN THIS TABLE ARE APPROX.

CAPSTAN MOTOR DRIVE SCHE


CAPSTAN SERVO
AUDIO/CONTROL HEAD UNIT
AUDIO HEAD
AUDIO ERASE HEAD
CONTROL HEAD
P1541
P2503
1 AUDIO HEAD 1
2 AUDIO HEAD 2
3 AUDIO ERASE HEAD 3
4 AUDIO ERASE HEAD 4
5 CONTROL HEAD 5
6 CONTROL HEAD GND 6
VJBS00B59
TO MAIN
P2501
P6201-1 AUDIO HEAD 1
P6201-2 AUDIO HEAD 2
P6201-4 AUDIO ERASE HEAD 4
P6201-3 AUDIO ERASE HEAD 3
P6201-6 CONTROL HEAD GND 6
P6201-5 CONTROL HEAD 5
P6201-13 CAP ERROR 13
P6201-14 V-REF 14
P6201-15 REV(H)/STOP(M)/FWD(L) 15
P6201-16 GND 16
P6201-19 GND 19
P6201-18 UNSW +14V 18
P6201-20 UNSW +5V(SYS.CTL) 20
P6201-17 CAP TORQUE LIMIT 17
P6201-12 CAP FG (-) 12
P6201-11 CAP FG (+) 11
P6201-7 MODE SW POSITION D 7
P6201-22 MODE SW POSITION C 22
P6201-21 MODE SW POSITION B 21
P6201-8 MODE SW POSITION A 8
P6201-9 LOADING MOTOR (+) 9
P6201-10 LOADING MOTOR (-) 10
LOADING MOTOR ASS'Y
VJBS00949
P2504
5 GND 5
4 MODE SW POSITION D 4
6 MODE SW POSITION C 6
7 MODE SW POSITION B 7
3 MODE SW POSITION A 3
2 LOADING MOTOR (+) 2
1 LOADING MOTOR (-) 1
LOADING MOTOR
MODE SELECT SWITCH
SW1551
5
4
3
2
1
A
B
C

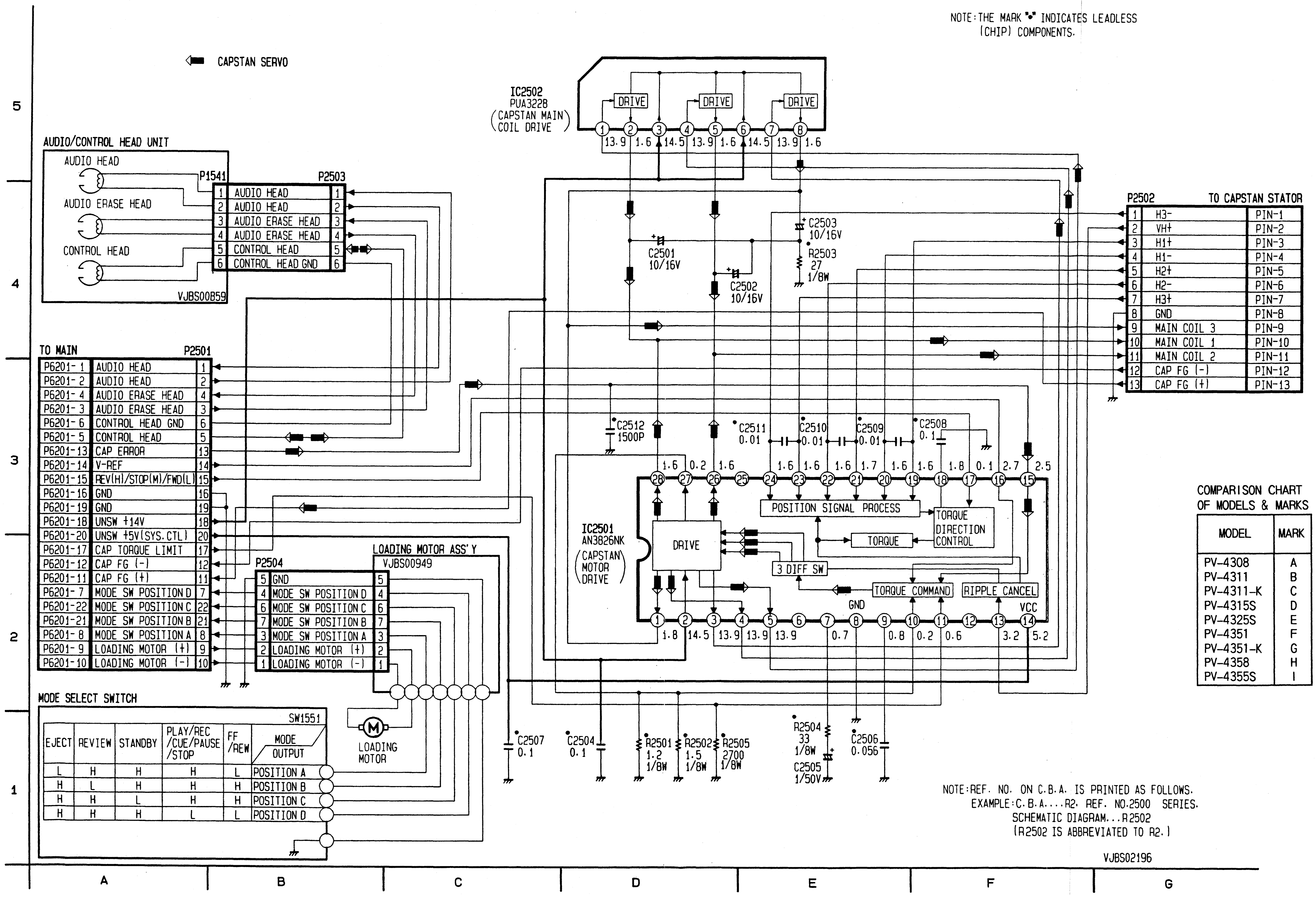
MODE SELECT SWITCH

SW1551

EJECT	REVIEW	STANDBY	PLAY/REC /CUE/PAUSE /STOP	FF /REW	MODE / OUTPUT
L	H	H	H	L	POSITION A
H	L	H	H	H	POSITION B
H	H	L	H	H	POSITION C
H	H	H	L	L	POSITION D

CAPSTAN MOTOR DRIVE SCHEMATIC DIAGRAM

NOTE: THE MARK "•" INDICATES LEADLESS
(CHIP) COMPONENTS.



CAPSTAN SERVO
IC2502
PUA3228
(CAPSTAN MAIN COIL DRIVE)
DRIVE
DRIVE
DRIVE
13.9 1.6 14.5 13.9 1.6 14.5 13.9 1.6
AUDIO/CONTROL HEAD UNIT
AUDIO HEAD
AUDIO ERASE HEAD
CONTROL HEAD
P1541
P2503
1 AUDIO HEAD
2 AUDIO HEAD
3 AUDIO ERASE HEAD
4 AUDIO ERASE HEAD
5 CONTROL HEAD
6 CONTROL HEAD GND
VJBS00B59
C2501 10/16V
C2502 10/16V
C2503 10/16V
R2503 27 1/8W
P2502
TO CAPSTAN STATOR
1 H3- PIN-1
2 VH+ PIN-2
3 H1+ PIN-3
4 H1- PIN-4
5 H2+ PIN-5
6 H2- PIN-6
7 H3+ PIN-7
8 GND PIN-8
9 MAIN COIL 3 PIN-9
10 MAIN COIL 1 PIN-10
11 MAIN COIL 2 PIN-11
12 CAP FG (-) PIN-12
13 CAP FG (+) PIN-13
TO MAIN
P2501
P6201-1 AUDIO HEAD 1
P6201-2 AUDIO HEAD 2
P6201-4 AUDIO ERASE HEAD 4
P6201-3 AUDIO ERASE HEAD 3
P6201-6 CONTROL HEAD GND 6
P6201-5 CONTROL HEAD 5
P6201-13 CAP ERROR 13
P6201-14 V-REF 14
P6201-15 REV(H)/STOP(M)/FWD(L) 15
P6201-16 GND 16
P6201-19 GND 19
P6201-18 UNSW +14V 18
P6201-20 UNSW +5V(SYS.CTL) 20
P6201-17 CAP TORQUE LIMIT 17
P6201-12 CAP FG (-) 12
P6201-11 CAP FG (+) 11
P6201-7 MODE SW POSITION D 7
P6201-22 MODE SW POSITION C 22
P6201-21 MODE SW POSITION B 21
P6201-8 MODE SW POSITION A 8
P6201-9 LOADING MOTOR (+) 9
P6201-10 LOADING MOTOR (-) 10
C2512 1500P
C2511 0.01
C2510 0.01
C2509 0.01
C2508 0.1
1.6 0.2 1.6 1.6 1.6 1.6 1.7 1.6 1.6 1.8 0.1 2.7 2.5
IC2501
AN3826NK
(CAPSTAN MOTOR DRIVE)
DRIVE
POSITION SIGNAL PROCESS
TORQUE DIRECTION CONTROL
TORQUE
3 DIFF SW
TORQUE COMMAND
RIPPLE CANCEL
GND
VCC
1.8 14.5 13.9 13.9 13.9 0.7 0.8 0.2 0.6 3.2 5.2
LOADING MOTOR ASS'Y
VJBS00949
P2504
5 GND 5
4 MODE SW POSITION D 4
6 MODE SW POSITION C 6
7 MODE SW POSITION B 7
3 MODE SW POSITION A 3
2 LOADING MOTOR (+) 2
1 LOADING MOTOR (-) 1
M
LOADING MOTOR
MODE SELECT SWITCH
SW1551
EJECT REVIEW STANDBY PLAY/REC/CUE/PAUSE/STOP FF/REW MODE OUTPUT
L H H H L POSITION A
H L H H H POSITION B
H H L H H POSITION C
H H H L L POSITION D
C2507 0.1
C2504 0.1
R2501 1.2 1/8W
R2502 1.5 1/8W
R2505 2700 1/8W
R2504 33 1/8W
C2505 1/50V
C2506 0.056
VJBS02196
5
4
3
2
1
A
B
C
D
E
F
G

COMPARISON CHART
OF MODELS & MARKS

MODEL	MARK
PV-4308	A
PV-4311	B
PV-4311-K	C
PV-4315S	D
PV-4325S	E
PV-4351	F
PV-4351-K	G
PV-4358	H
PV-4355S	I

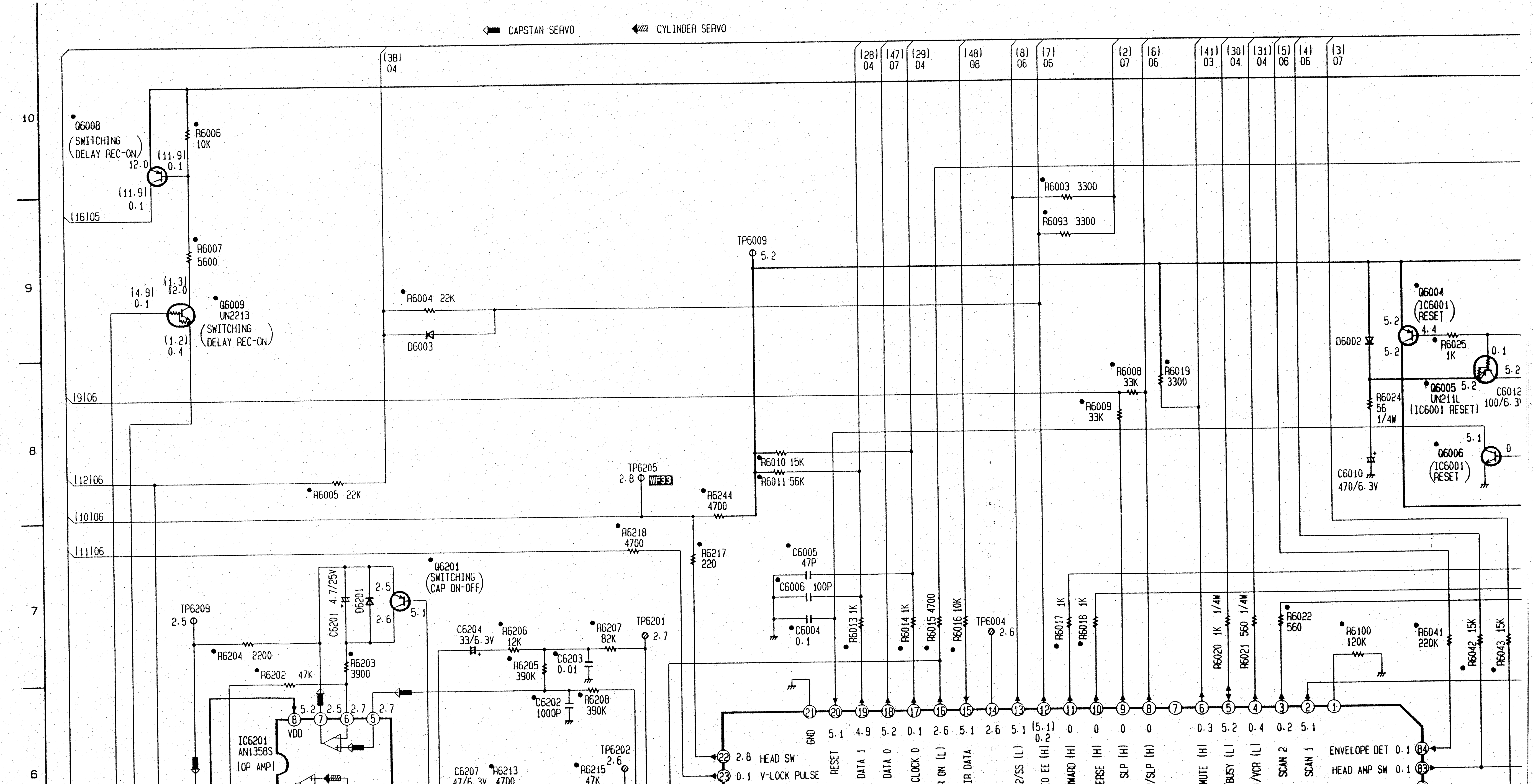
NOTE: REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE: C.B.A.....R2. REF. NO.2500 SERIES.
SCHEMATIC DIAGRAM...R2502
(R2502 IS ABBREVIATED TO R2.)

MAIN I (POWER SUPPLY/SYSTEM CONTROL/SERVO) SCHEMATIC DIA

NOTE: HOW TO READ CONVERGED LINES
(100)B4
LOCATION GRID NUMBER OF THE OTHER END OF THE LINE
LINE NUMBER

NOTE:
1. DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.
2. TO MAINTAIN ORIGINAL FUNCTION AND RELIABILITY OF REPAIRED UNITS, USE ONLY ORIGINAL REPLACEMENT PARTS WHICH ARE LISTED WITH THEIR PART NUMBERS IN THE PARTS LIST SECTION OF THE SERVICE MANUAL.

IMPORTANT SAF
COMPONENTS IE
SPECIAL CHAR
WHEN REPLACIN
USE ONLY THE

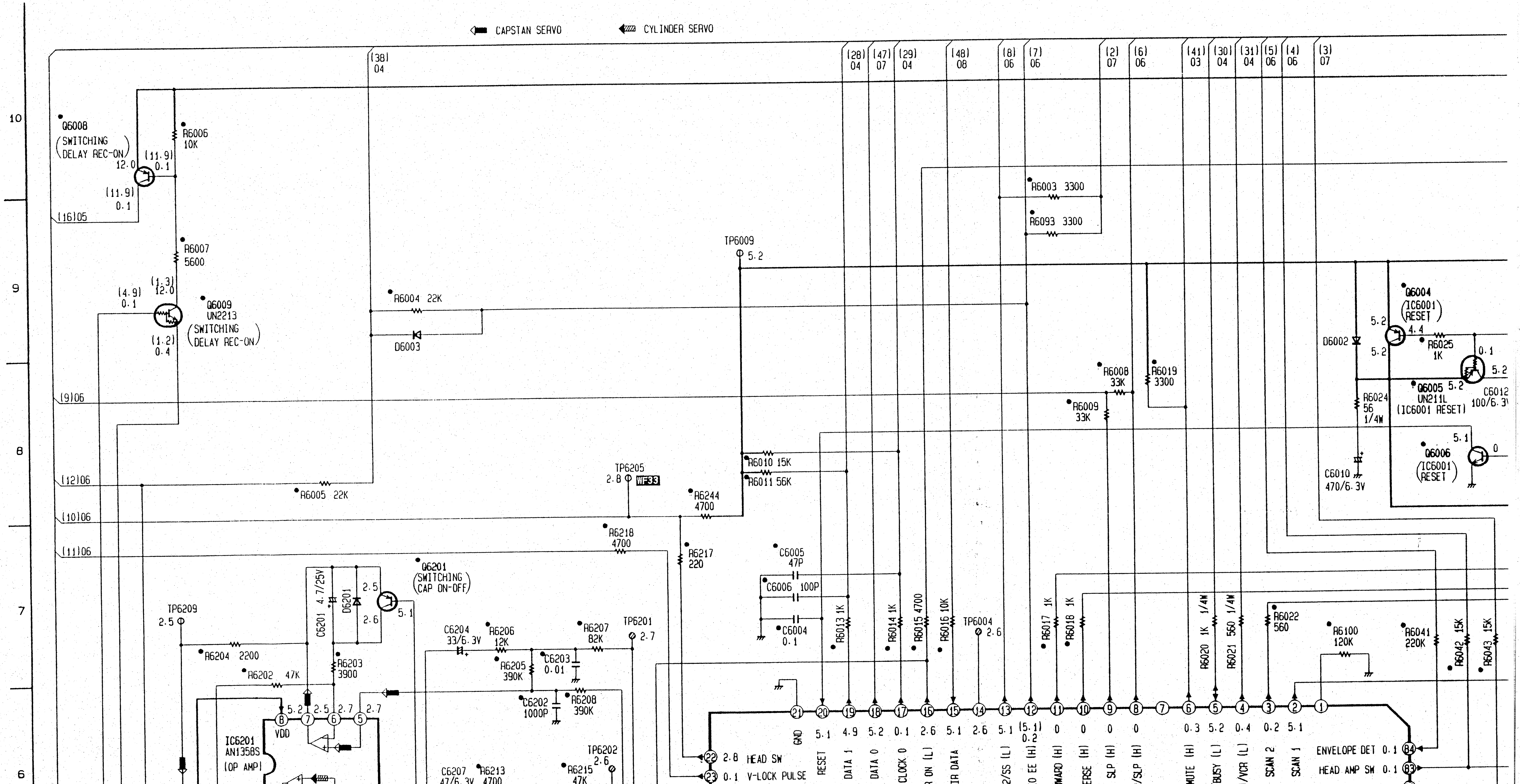

CAPSTAN SERVO
CYLINDER SERVO
10
9
8
7
6
Q6008
SWITCHING DELAY REC-ON
R6006 10K
R6007 5600
Q6009 UN2213
SWITCHING DELAY REC-ON
R6004 22K
D6003
R6005 22K
TP6009 5.2
R6003 3300
R6093 3300
R6008 33K
R6019 3300
R6009 33K
R6010 15K
R6011 56K
TP6205 2.8
R6244 4700
R6218 4700
R6217 220
C6005 47P
C6006 100P
C6004 0.1
R6013 1K
R6014 1K
R6015 4700
R6016 10K
TP6004 2.6
R6017 1K
R6018 1K
R6020 1K 1/4W
R6021 560 1/4W
R6022 560
R6100 120K
R6041 220K
R6042 15K
R6043 15K
Q6004 (IC6001 RESET)
D6002
R6025 1K
Q6005 UN211L (IC6001 RESET)
R6024 56 1/4W
C6010 470/6.3V
Q6006 (IC6001 RESET)
C6012 100/6.3V
Q6201 (SWITCHING CAP ON-OFF)
TP6209 2.5
C6201 4.7/25V
D6201
R6204 2200
R6202 47K
R6203 3900
C6204 33/6.3V
R6206 12K
R6205 390K
C6203 0.01
R6207 82K
TP6201 2.7
C6202 1000P
R6208 390K
IC6201 AN1358S (OP AMP)
VDD
C6207 47/6.3V
R6213 4700
R6215 47K
TP6202 2.6
(16)05
(9)06
(12)06
(10)06
(11)06
(38) 04
(28) 04
(47) 07
(29) 04
(48) 08
(8) 06
(7) 06
(2) 07
(6) 06
(41) 03
(30) 04
(31) 04
(5) 06
(4) 06
(3) 07
GND
RESET
DATA 1
DATA 0
CLOCK 0
SLP (H)
SCAN 2
SCAN 1
ENVELOPE DET
HEAD AMP SW
HEAD SW
V-LOCK PULSE

MAIN I (POWER SUPPLY/SYSTEM CONTROL/SERVO) SCHEMATIC DIA

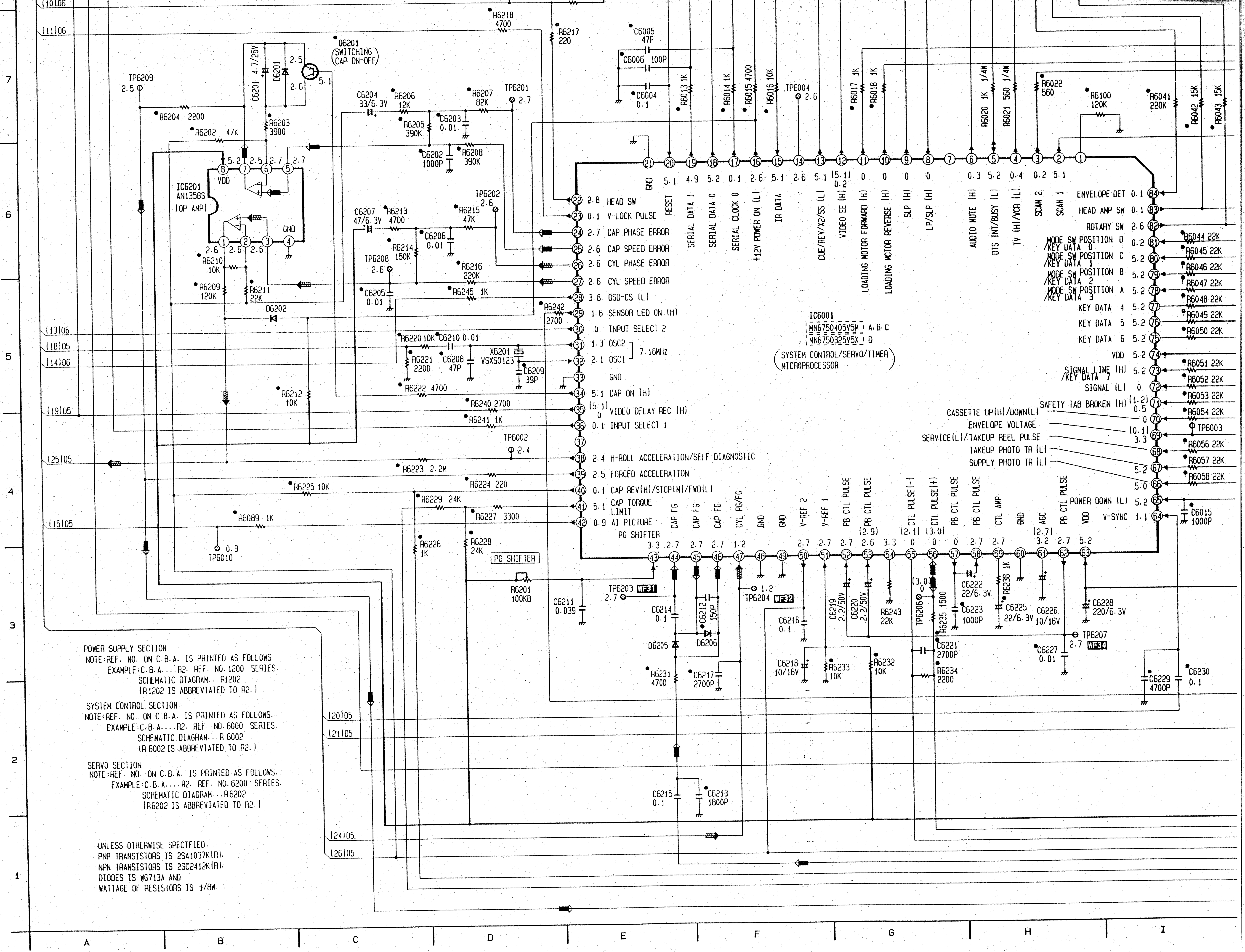
NOTE: HOW TO READ CONVERGED LINES
(100) B4
LOCATION GRID NUMBER OF THE OTHER END OF THE LINE
LINE NUMBER

NOTE:
1. DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.
2. TO MAINTAIN ORIGINAL FUNCTION AND RELIABILITY OF REPAIRED UNITS, USE ONLY ORIGINAL REPLACEMENT PARTS WHICH ARE LISTED WITH THEIR PART NUMBERS IN THE PARTS LIST SECTION OF THE SERVICE MANUAL.

IMPORTANT SAF
COMPONENTS II
SPECIAL CHAR/
WHEN REPLACIN
USE ONLY THE



CAPSTAN SERVO
CYLINDER SERVO
10
9
8
7
6
Q6008 (SWITCHING DELAY REC-ON)
R6006 10K
R6007 5600
Q6009 UN2213 (SWITCHING DELAY REC-ON)
R6004 22K
D6003
R6005 22K
TP6009 5.2
R6003 3300
R6093 3300
R6008 33K
R6009 33K
R6019 3300
R6010 15K
R6011 56K
TP6205 2.8
WF33
R6244 4700
R6218 4700
R6217 220
C6005 47P
C6006 100P
C6004 0.1
R6013 1K
R6014 1K
R6015 4700
R6016 10K
TP6004 2.6
R6017 1K
R6018 1K
R6020 1K 1/4W
R6021 560 1/4W
R6022 560
R6100 120K
R6041 220K
R6042 15K
R6043 15K
Q6004 (IC6001 RESET)
R6025 1K
D6002
Q6005 UN211L (IC6001 RESET)
R6024 56 1/4W
C6010 470/6.3V
Q6006 (IC6001 RESET)
C6012 100/6.3V
Q6201 (SWITCHING CAP ON-OFF)
C6201 4.7/25V
D6201
R6203 3900
TP6209 2.5
R6204 2200
R6202 47K
IC6201 AN1358S (OP AMP)
VDD
C6204 33/6.3V
R6206 12K
R6205 390K
C6203 0.01
R6207 82K
TP6201 2.7
C6202 1000P
R6208 390K
TP6202 2.6
C6207 47/6.3V
R6213 4700
R6215 47K
GND
RESET
DATA 1
DATA 0
CLOCK 0
R ON (L)
IR DATA
2/SS (L)
O EE (H)
WARD (H)
ERSE (H)
SLP (H)
/SLP (H)
MUTE (H)
BUSY (L)
/VCR (L)
SCAN 2
SCAN 1
ENVELOPE DET 0.1 84
HEAD AMP SW 0.1 83
2.8 HEAD SW 22
0.1 V-LOCK PULSE 23


(10)06
(11)06
(13)06
(18)05
(14)06
(19)05
(25)05
(15)05
(20)05
(21)05
(24)05
(26)05
TP6209 2.5
R6204 2200
R6202 47K
C6201 4.7/25V
D6201
Q6201 (SWITCHING CAP ON-OFF)
R6203 3900
IC6201 AN1358S (OP AMP)
VDD
GND
R6210 10K
R6209 120K
R6211 22K
D6202
R6212 10K
R6225 10K
R6089 1K
TP6010 0.9
C6204 33/6.3V
R6206 12K
R6205 390K
C6203 0.01
R6207 82K
TP6201 2.7
C6202 1000P
R6208 390K
C6207 47/6.3V
R6213 4700
R6214 150K
TP6208 2.6
C6206 0.01
R6215 47K
TP6202 2.6
R6216 220K
C6205 0.01
R6245 1K
R6242 2700
R6220 10K
C6210 0.01
R6221 2200
C6208 47P
X6201 VSXS0123
C6209 39P
R6222 4700
R6240 2700
R6241 1K
TP6002 2.4
R6223 2.2M
R6224 220
R6229 24K
R6227 3300
R6226 1K
R6228 24K
PG SHIFTER
R6201 100KB
R6218 4700
R6217 220
C6005 47P
C6006 100P
C6004 0.1
R6013 1K
R6014 1K
R6015 4700
R6016 10K
TP6004 2.6
R6017 1K
R6018 1K
R6020 1K 1/4W
R6021 560 1/4W
R6022 560
R6100 120K
R6041 220K
R6042 15K
R6043 15K
IC6001 MN6750405V5M A·B·C MN6750325V5X D (SYSTEM CONTROL/SERVO/TIMER MICROPROCESSOR)
GND
RESET
SERIAL DATA 1
SERIAL DATA 0
SERIAL CLOCK 0
+12V POWER ON (L)
IR DATA
CUE/REV/X2/SS (L)
VIDEO EE (H)
LOADING MOTOR FORWARD (H)
LOADING MOTOR REVERSE (H)
SLP (H)
LP/SLP (H)
AUDIO MUTE (H)
DTS INT/BUSY (L)
TV (H)/VCR (L)
SCAN 2
SCAN 1
HEAD SW
V-LOCK PULSE
CAP PHASE ERROR
CAP SPEED ERROR
CYL PHASE ERROR
CYL SPEED ERROR
OSD-CS (L)
SENSOR LED ON (H)
INPUT SELECT 2
OSC2
OSC1
7.16MHz
GND
CAP ON (H)
VIDEO DELAY REC (H)
INPUT SELECT 1
H-ROLL ACCELERATION/SELF-DIAGNOSTIC
FORCED ACCELERATION
CAP REV(H)/STOP(M)/FWD(L)
CAP TORQUE LIMIT
AI PICTURE
PG SHIFTER
CAP FG
CAP FG
CAP FG
CYL PG/FG
GND
GND
V-REF 2
V-REF 1
PB CTL PULSE
PB CTL PULSE
CTL PULSE(-)
CTL PULSE(+)
PB CTL PULSE
PB CTL PULSE
CTL AMP
GND
AGC
PB CTL PULSE
VDD
ENVELOPE DET
HEAD AMP SW
ROTARY SW
MODE SW POSITION D /KEY DATA 0
MODE SW POSITION C /KEY DATA 1
MODE SW POSITION B /KEY DATA 2
MODE SW POSITION A /KEY DATA 3
KEY DATA 4
KEY DATA 5
KEY DATA 6
VDD
SIGNAL LINE (H) /KEY DATA 7
SIGNAL (L)
SAFETY TAB BROKEN (H)
CASSETTE UP(H)/DOWN(L)
ENVELOPE VOLTAGE
SERVICE(L)/TAKEUP REEL PULSE
TAKEUP PHOTO TR (L)
SUPPLY PHOTO TR (L)
POWER DOWN (L)
V-SYNC
R6044 22K
R6045 22K
R6046 22K
R6047 22K
R6048 22K
R6049 22K
R6050 22K
R6051 22K
R6052 22K
R6053 22K
R6054 22K
TP6003
R6056 22K
R6057 22K
R6058 22K
C6015 1000P
C6211 0.039
TP6203 2.7 WF31
C6214 0.1
C6212 150P
D6205
D6206
R6231 4700
C6217 2700P
TP6204 1.2 WF32
C6216 0.1
C6218 10/16V
C6219 2.2/50V
C6220 2.2/50V
R6233 10K
R6232 10K
R6243 22K
TP6206
R6235 1500
C6221 2700P
R6234 2200
C6222 22/6.3V
C6223 1000P
R6238 1K
C6225 22/6.3V
C6226 10/16V
C6227 0.01
C6228 220/6.3V
TP6207 2.7 WF34
C6229 4700P
C6230 0.1
C6215 0.1
C6213 1800P
A
B
C
D
E
F
G
H
I
1
2
3
4
5
6
7

POWER SUPPLY SECTION
NOTE:REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE:C.B.A....R2. REF. NO. 1200 SERIES.
SCHEMATIC DIAGRAM...R1202
(R1202 IS ABBREVIATED TO R2.)

SYSTEM CONTROL SECTION
NOTE:REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE:C.B.A....R2. REF. NO.6000 SERIES.
SCHEMATIC DIAGRAM...R 6002
(R 6002 IS ABBREVIATED TO R2.)

SERVO SECTION
NOTE:REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE:C.B.A....R2. REF. NO.6200 SERIES.
SCHEMATIC DIAGRAM...R6202
(R6202 IS ABBREVIATED TO R2.)

UNLESS OTHERWISE SPECIFIED:
PNP TRANSISTORS IS 2SA1037K(R).
NPN TRANSISTORS IS 2SC2412K(R).
DIODES IS WG713A AND
WATTAGE OF RESISTORS IS 1/8W.

UPPLY/SYSTEM CONTROL/SERVO) SCHEMATIC DIAGRAM (A, B, C, D)

NOTE:
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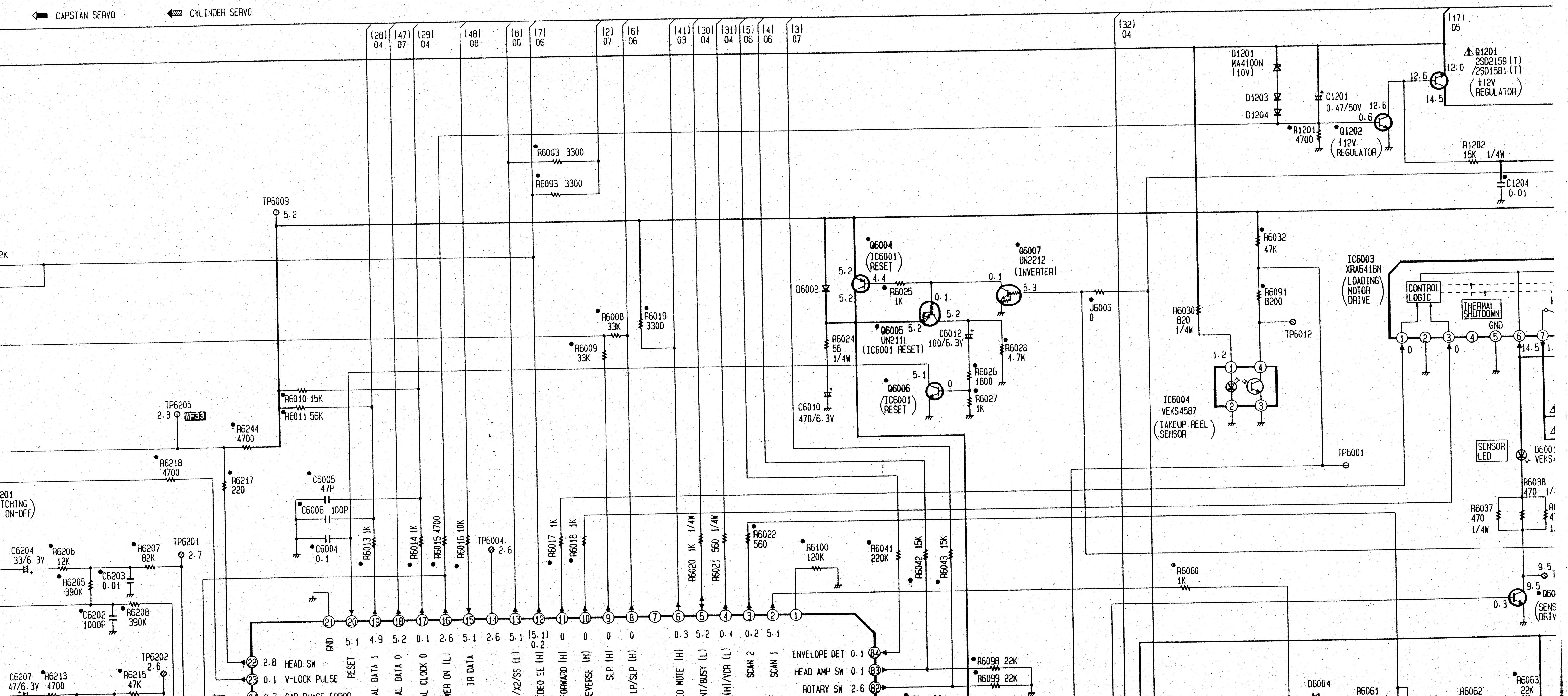
2. TO MAINTAIN ORIGINAL FUNCTION AND RELIABILITY OF REPAIRED UNITS, USE ONLY ORIGINAL REPLACEMENT PARTS WHICH ARE LISTED WITH THEIR PART NUMBERS IN THE PARTS LIST SECTION OF THE SERVICE MANUAL.

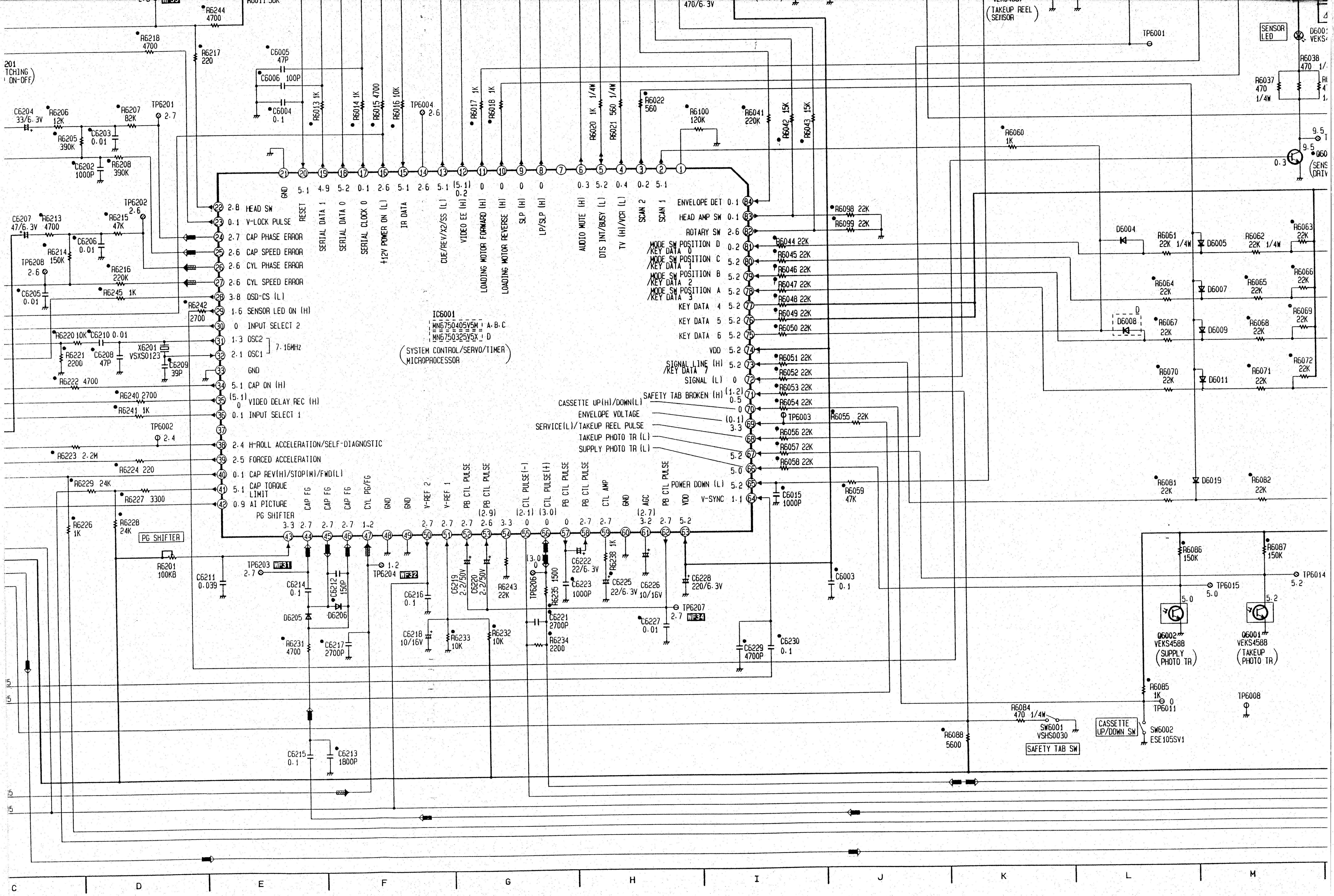
NE

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS,
USE ONLY THE SPECIFIED PARTS.

NOTE: THE MARK "•" INDICATES LEADLESS (CHIP) COMPONENTS.



CAPSTAN SERVO
CYLINDER SERVO
(28) 04
(47) 07
(29) 04
(48) 08
(8) 06
(7) 05
(2) 07
(6) 06
(41) 03
(30) 04
(31) 04
(5) 06
(4) 06
(3) 07
(32) 04
(17) 05
D1201 MA4100N (10V)
D1203
D1204
C1201 0.47/50V
R1201 4700
Q1202 (+12V REGULATOR)
⚠Q1201 2SD2159(T) /2SD1581(T) (+12V REGULATOR)
12.6
12.0
14.5
0.6
R1202 15K 1/4W
C1204 0.01
R6003 3300
R6093 3300
TP6009 5.2
2K
Q6004 (IC6001 RESET)
Q6007 UN2212 (INVERTER)
R6025 1K
Q6005 UN2111L (IC6001 RESET)
Q6006 (IC6001 RESET)
D6002
C6012 100/6.3V
R6024 56 1/4W
R6028 4.7K
R6026 1800
R6027 1K
C6010 470/6.3V
R6008 33K
R6019 3300
R6009 33K
J6006 0
R6032 47K
R6091 8200
TP6012
R6030 820 1/4W
IC6004 VEKS4587 (TAKEUP REEL SENSOR)
IC6003 XRA6416N (LOADING MOTOR DRIVE)
CONTROL LOGIC
THERMAL SHUTDOWN
GND
TP6001
SENSOR LED
D600 VEKS
R6038 470 1/
R6037 470 1/4W
TP6205 2.8 WF33
R6244 4700
R6010 15K
R6011 56K
R6218 4700
R6217 220
201 TCHING ON-OFF)
C6005 47P
C6006 100P
C6004 0.1
R6013 1K
R6014 1K
R6015 4700
R6016 10K
TP6004 2.6
R6017 1K
R6018 1K
R6020 1K 1/4W
R6021 560 1/4W
R6022 560
R6100 120K
R6041 220K
R6042 15K
R6043 15K
R6060 1K
C6204 33/6.3V
R6206 12K
R6205 390K
C6203 0.01
R6207 82K
TP6201 2.7
C6202 1000P
R6208 390K
TP6202 2.6
C6207 47/6.3V
R6213 4700
R6215 47K
GND
RESET
AL DATA 1
AL DATA 0
AL CLOCK 0
ER ON (L)
IR DATA
/X2/SS (L)
DEO EE (H)
ORWARD (H)
EVERSE (H)
SLP (H)
LP/SLP (H)
O MUTE (H)
NT/BUSY (L)
(HI/VCR (L)
SCAN 2
SCAN 1
5.1 4.9 5.2 0.1 2.6 5.1 2.6 5.1 (5.1) 0.2 0 0 0 0 0.3 5.2 0.4 0.2 5.1
HEAD SW 2.8
V-LOCK PULSE 0.1
CAP PHASE ERROR
ENVELOPE DET 0.1
HEAD AMP SW 0.1
ROTARY SW 2.6
R6098 22K
R6099 22K
D6004
R6061
R6062
R6063 22K
9.5
0.3
Q60 (SENS DRIV


IC6001
MN6750405V5M A.B.C
MN6750325V5X D
(SYSTEM CONTROL/SERVO/TIMER MICROPROCESSOR)
GND
RESET
SERIAL DATA 1
SERIAL DATA 0
SERIAL CLOCK 0
+12V POWER ON (L)
IR DATA
CUE/REV/X2/SS (L)
VIDEO EE (H)
LOADING MOTOR FORWARD (H)
LOADING MOTOR REVERSE (H)
SLP (H)
LP/SLP (H)
AUDIO MUTE (H)
DTS INT/BUSY (L)
TV (H)/VCR (L)
SCAN 2
SCAN 1
HEAD SW
V-LOCK PULSE
CAP PHASE ERROR
CAP SPEED ERROR
CYL PHASE ERROR
CYL SPEED ERROR
OSD-CS (L)
SENSOR LED ON (H)
INPUT SELECT 2
OSC2
OSC1
7.16MHz
CAP ON (H)
VIDEO DELAY REC (H)
INPUT SELECT 1
H-ROLL ACCELERATION/SELF-DIAGNOSTIC
FORCED ACCELERATION
CAP REV(H)/STOP(M)/FWD(L)
CAP TORQUE LIMIT
AI PICTURE
PG SHIFTER
CAP FG
CAP FG
CAP FG
CYL PG/FG
GND
GND
V-REF 2
V-REF 1
PB CTL PULSE
PB CTL PULSE
CTL PULSE(-)
CTL PULSE(+)
PB CTL PULSE
PB CTL PULSE
CTL AMP
GND
AGC
PB CTL PULSE
VDD
ENVELOPE DET
HEAD AMP SW
ROTARY SW
MODE SW POSITION D /KEY DATA 0
MODE SW POSITION C /KEY DATA 1
MODE SW POSITION B /KEY DATA 2
MODE SW POSITION A /KEY DATA 3
KEY DATA 4
KEY DATA 5
KEY DATA 6
VDD
SIGNAL LINE (H) /KEY DATA 7
SIGNAL (L)
SAFETY TAB BROKEN (H)
CASSETTE UP(H)/DOWN(L)
ENVELOPE VOLTAGE
SERVICE(L)/TAKEUP REEL PULSE
TAKEUP PHOTO TR (L)
SUPPLY PHOTO TR (L)
POWER DOWN (L)
V-SYNC
TP6001
TP6002
TP6003
TP6004
TP6008
TP6011
TP6014
TP6015
TP6201
TP6202
TP6203 WF31
TP6204 WF32
TP6206
TP6207 WF34
TP6208
X6201 VSXS0123
PG SHIFTER
R6201 100KB
SENSOR LED
D6001 VEKS
(TAKEUP REEL SENSOR)
Q6002 VEKS4588 (SUPPLY PHOTO TR)
Q6001 VEKS4588 (TAKEUP PHOTO TR)
SW6001 VSHS0030
SAFETY TAB SW
CASSETTE UP/DOWN SW
SW6002 ESE105SV1
R6084 470 1/4W
R6085 1K
R6088 5600
R6086 150K
R6087 150K
D6004
D6005
D6007
D6008
D6009
D6011
D6019
D6205
D6206
C
D
E
F
G
H
I
J
K
L
M

GRAM (A, B, C, D)

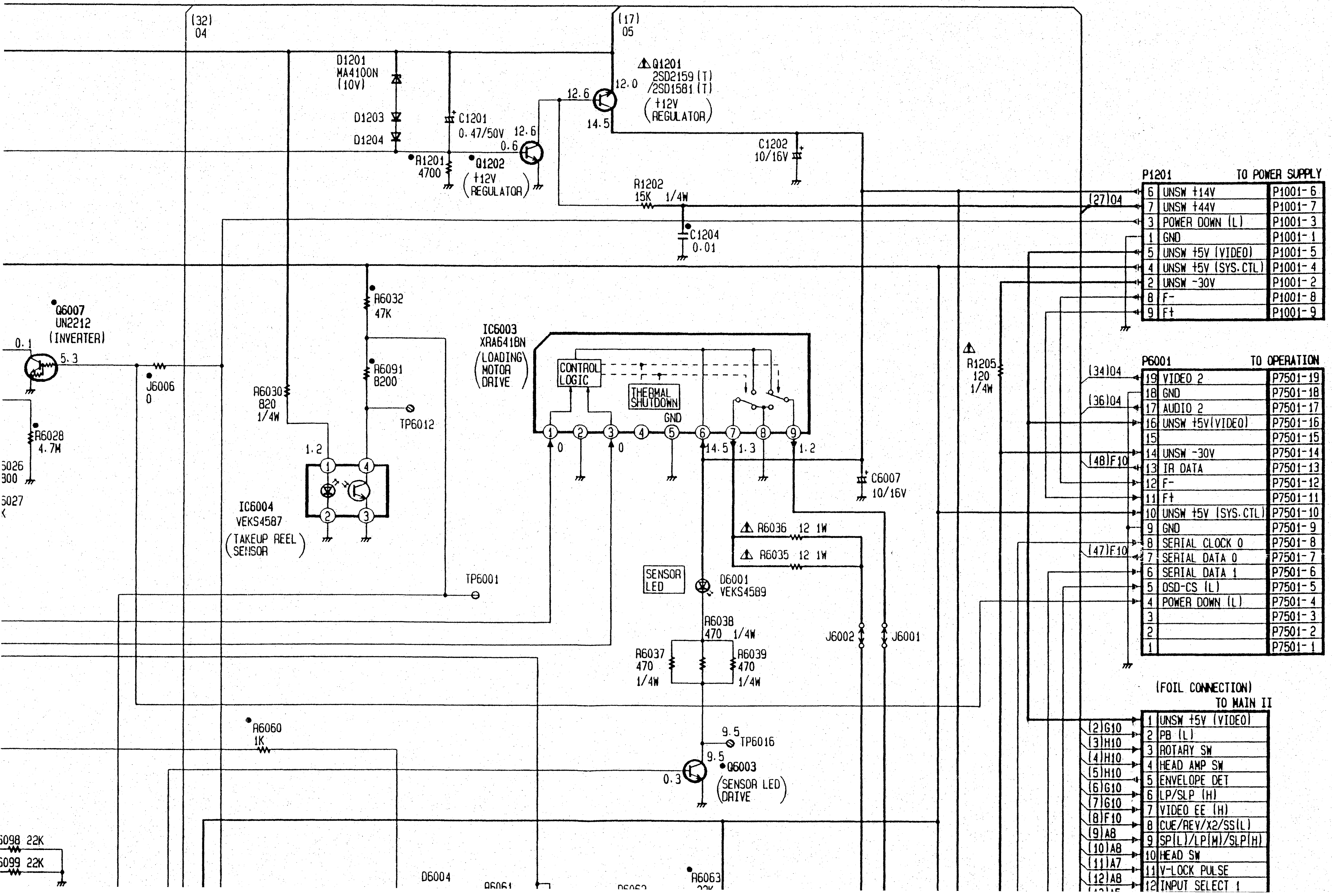
ʏ NOTICE:
TIFIED BY THE SIGN ⚠ HAVE
ERISTICS IMPORTANT FOR SAFETY.
ANY OF THESE COMPONENTS,
ECIFIED PARTS.

NOTE: THE MARK "•" INDICATES LEADLESS
(CHIP) COMPONENTS.

TEST POINT INFORMATION
⦶ : TEST POINT WITH A JUMPER WIRE ACROSS A HOLE IN THE P.C.B.
▭→ : TEST POINT WITH A COMPONENT LEAD ON THE FOIL SIDE.
⊘ : TEST POINT WITH NO TEST PIN.
● : TEST POINT WITH A TEST PIN.

COMPARISON CHART
OF MODELS & MARKS

MODEL	MARK
PV-4308	A
PV-4311	B
PV-4311-K	C
PV-4315S	D
PV-4325S	E
PV-4351	F
PV-4351-K	G
PV-4358	H
PV-4355S	I



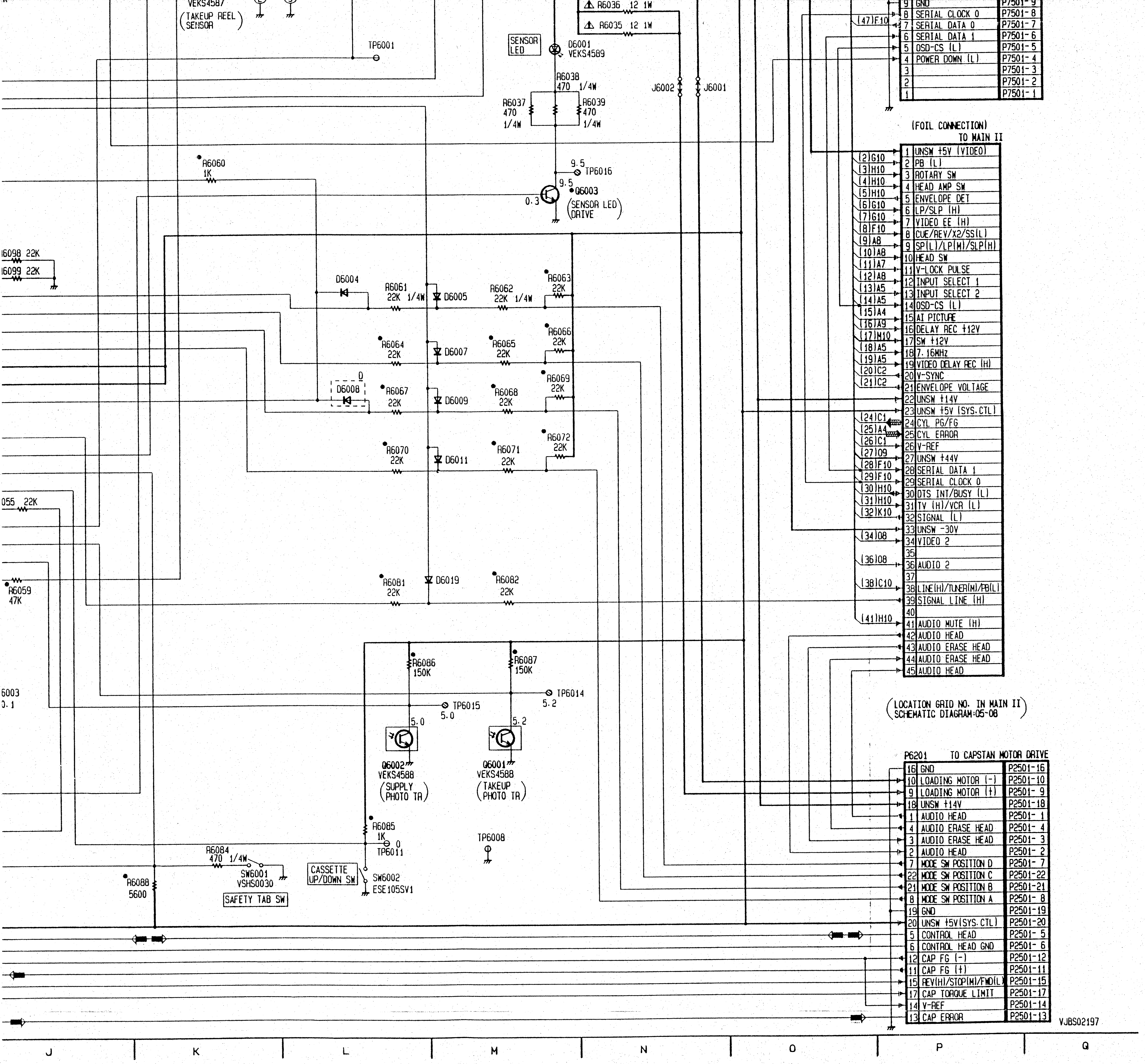
(32) 04
(17) 05
D1201 MA4100N (10V)
D1203
D1204
C1201 0.47/50V
R1201 4700
Q1201 2SD2159(T) /2SD1581(T) (+12V REGULATOR)
12.6
12.0
14.5
0.6
Q1202 (+12V REGULATOR)
C1202 10/16V
R1202 15K 1/4W
C1204 0.01
P1201 TO POWER SUPPLY
(27)04
6 UNSW +14V P1001-6
7 UNSW +44V P1001-7
3 POWER DOWN (L) P1001-3
1 GND P1001-1
5 UNSW +5V (VIDEO) P1001-5
4 UNSW +5V (SYS.CTL) P1001-4
2 UNSW -30V P1001-2
8 F- P1001-8
9 F+ P1001-9
Q6007 UN2212 (INVERTER)
0.1
5.3
J6006 0
R6028 4.7M
R6032 47K
R6091 8200
R6030 820 1/4W
TP6012
1.2
IC6004 VEKS4587 (TAKEUP REEL SENSOR)
IC6003 XRA6418N (LOADING MOTOR DRIVE)
CONTROL LOGIC
THERMAL SHUTDOWN
GND
0
14.5
1.3
1.2
R1205 120 1/4W
C6007 10/16V
R6036 12 1W
R6035 12 1W
TP6001
SENSOR LED
D6001 VEKS4589
R6038 470 1/4W
R6037 470 1/4W
R6039 470 1/4W
J6002
J6001
P6001 TO OPERATION
(34)04
(36)04
(48)F10
(47)F10
19 VIDEO 2 P7501-19
18 GND P7501-18
17 AUDIO 2 P7501-17
16 UNSW +5V(VIDEO) P7501-16
15 P7501-15
14 UNSW -30V P7501-14
13 IR DATA P7501-13
12 F- P7501-12
11 F+ P7501-11
10 UNSW +5V (SYS.CTL) P7501-10
9 GND P7501-9
8 SERIAL CLOCK 0 P7501-8
7 SERIAL DATA 0 P7501-7
6 SERIAL DATA 1 P7501-6
5 OSD-CS (L) P7501-5
4 POWER DOWN (L) P7501-4
3 P7501-3
2 P7501-2
1 P7501-1
(FOIL CONNECTION) TO MAIN II
(2)G10 1 UNSW +5V (VIDEO)
(3)H10 2 PB (L)
(4)H10 3 ROTARY SW
(5)H10 4 HEAD AMP SW
(6)G10 5 ENVELOPE DET
(7)G10 6 LP/SLP (H)
(8)F10 7 VIDEO EE (H)
(9)A8 8 CUE/REV/X2/SS(L)
(10)A8 9 SP(L)/LP(M)/SLP(H)
(11)A7 10 HEAD SW
(12)A8 11 V-LOCK PULSE
12 INPUT SELECT 1
R6060 1K
9.5
TP6016
Q6003 (SENSOR LED DRIVE)
0.3
6098 22K
6099 22K
6026 300
6027
D6004
R6061
R6062
R6063

POWER SUPPLY
SECTION

TRANSISTOR	
Q1201	M-10
Q1202	L-9
CONNECTOR	
P1201	P-10

SYSTEM CONTROL
SECTION

TRANSISTOR	
Q6001	M-3
Q6002	L-3
Q6003	M-6
Q6004	I-9
Q6005	I-8
Q6006	I-8
Q6007	J-9
Q6008	A-10
Q6009	B-9
IC	
IC6001	F-5
IC6003	L-9
IC6004	K-8
CONNECTOR	
P6001	P-9
TEST POINT	


VEKS4587
(TAKEUP REEL SENSOR)
TP6001
R6036 12 1W
R6035 12 1W
SENSOR LED
D6001 VEKS4589
R6038 470 1/4W
R6037 470 1/4W
R6039 470 1/4W
J6002
J6001
R6060 1K
9.5
TP6016
9.5
Q6003
0.3
(SENSOR LED DRIVE)
R6098 22K
R6099 22K
D6004
R6061 22K 1/4W
D6005
R6062 22K 1/4W
R6063 22K
R6064 22K
D6007
R6065 22K
R6066 22K
D6008
R6067 22K
D6009
R6068 22K
R6069 22K
R6070 22K
D6011
R6071 22K
R6072 22K
R6055 22K
R6059 47K
R6081 22K
D6019
R6082 22K
R6086 150K
R6087 150K
TP6015
5.0
TP6014
5.2
Q6003
0.1
5.0
5.2
Q6002 VEKS4588 (SUPPLY PHOTO TR)
Q6001 VEKS4588 (TAKEUP PHOTO TR)
R6085 1K
0
TP6011
TP6008
R6084 470 1/4W
SW6001 VSHS0030
SAFETY TAB SW
CASSETTE UP/DOWN SW
SW6002 ESE105SV1
R6088 5600
(47)F10
9 GND P7501-9
8 SERIAL CLOCK 0 P7501-8
7 SERIAL DATA 0 P7501-7
6 SERIAL DATA 1 P7501-6
5 OSD-CS (L) P7501-5
4 POWER DOWN (L) P7501-4
3 P7501-3
2 P7501-2
1 P7501-1
(FOIL CONNECTION) TO MAIN II
(2)G10 1 UNSW +5V (VIDEO)
(3)H10 2 PB (L)
(4)H10 3 ROTARY SW
(5)H10 4 HEAD AMP SW
(6)G10 5 ENVELOPE DET
(7)G10 6 LP/SLP (H)
(8)F10 7 VIDEO EE (H)
(9)A8 8 CUE/REV/X2/SS(L)
(10)A8 9 SP(L)/LP(M)/SLP(H)
(11)A7 10 HEAD SW
(12)A8 11 V-LOCK PULSE
(13)A5 12 INPUT SELECT 1
(14)A5 13 INPUT SELECT 2
(15)A4 14 OSD-CS (L)
(16)A9 15 AI PICTURE
(17)M10 16 DELAY REC +12V
(18)A5 17 SW +12V
(19)A5 18 7.16MHz
(20)C2 19 VIDEO DELAY REC (H)
(21)C2 20 V-SYNC
21 ENVELOPE VOLTAGE
22 UNSW +14V
23 UNSW +5V (SYS.CTL)
(24)C1 24 CYL PG/FG
(25)A4 25 CYL ERROR
(26)C1 26 V-REF
(27)O9 27 UNSW +44V
(28)F10 28 SERIAL DATA 1
(29)F10 29 SERIAL CLOCK 0
(30)H10 30 OTS INT/BUSY (L)
(31)H10 31 TV (H)/VCR (L)
(32)K10 32 SIGNAL (L)
33 UNSW -30V
(34)O8 34 VIDEO 2
35
(36)O8 36 AUDIO 2
37
(38)C10 38 LINE(H)/TUNER(M)/PB(L)
39 SIGNAL LINE (H)
40
(41)H10 41 AUDIO MUTE (H)
42 AUDIO HEAD
43 AUDIO ERASE HEAD
44 AUDIO ERASE HEAD
45 AUDIO HEAD
(LOCATION GRID NO. IN MAIN II SCHEMATIC DIAGRAM:05-08)
P6201 TO CAPSTAN MOTOR DRIVE
16 GND P2501-16
10 LOADING MOTOR (-) P2501-10
9 LOADING MOTOR (+) P2501-9
18 UNSW +14V P2501-18
1 AUDIO HEAD P2501-1
4 AUDIO ERASE HEAD P2501-4
3 AUDIO ERASE HEAD P2501-3
2 AUDIO HEAD P2501-2
7 MODE SW POSITION D P2501-7
22 MODE SW POSITION C P2501-22
21 MODE SW POSITION B P2501-21
8 MODE SW POSITION A P2501-8
19 GND P2501-19
20 UNSW +5V(SYS.CTL) P2501-20
5 CONTROL HEAD P2501-5
6 CONTROL HEAD GND P2501-6
12 CAP FG (-) P2501-12
11 CAP FG (+) P2501-11
15 REV(H)/STOP(M)/FWD(L) P2501-15
17 CAP TORQUE LIMIT P2501-17
14 V-REF P2501-14
13 CAP ERROR P2501-13
VJBS02197
J
K
L
M
N
O
P
Q

TRANSISTOR	
Q6001	M-3
Q6002	L-3
Q6003	M-6
Q6004	I-9
Q6005	I-8
Q6006	I-8
Q6007	J-9
Q6008	A-10
Q6009	B-9
IC	
IC6001	F-5
IC6003	L-9
IC6004	K-8
CONNECTOR	
P6001	P-9
TEST POINT	
TP6001	L-7
TP6002	D-4
TP6003	I-4
TP6004	F-7
TP6008	M-2
TP6009	E-9
TP6010	B-3
TP6011	L-2
TP6012	L-8
TP6014	M-3
TP6015	M-3
TP6016	N-6

SERVO SECTION

TRANSISTOR	
Q6201	C-7
IC	
IC6201	B-6
CONNECTOR	
P6201	P-3
TEST POINT	
TP6201	D-7
TP6202	D-6
TP6203	E-3
TP6204	F-3
TP6205	D-8
TP6206	G-3
TP6207	H-3
TP6208	C-6
TP6209	A-7
ADJUSTMENT	
R6201	D-3

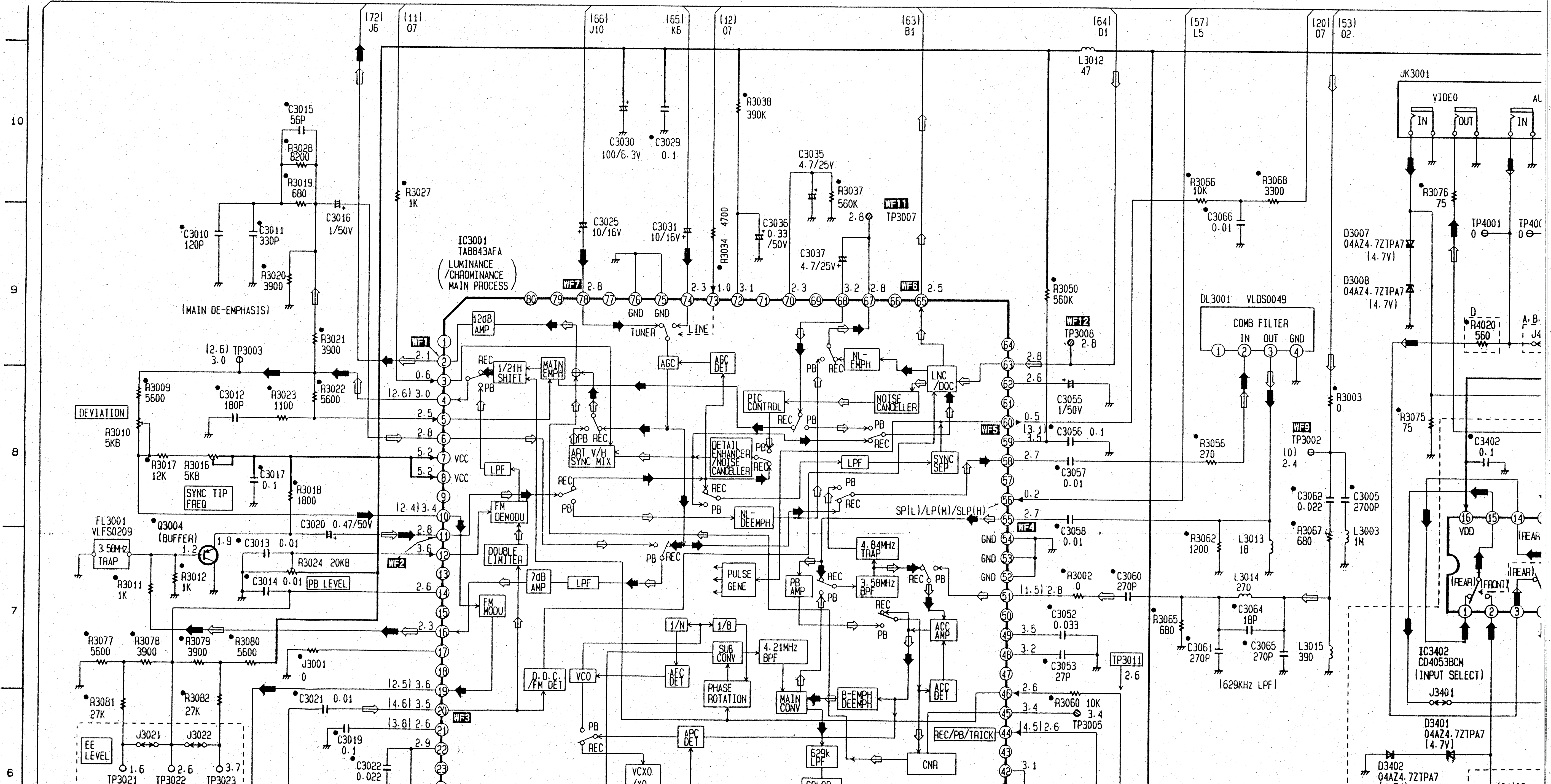
MAIN II (CYLINDER DRIVE/SIGNAL PROCESS/AUDIO) SCHEMATIC DI

NOTE: HOW TO READ CONVERGED LINES
(100)B4
LOCATION GRID NUMBER OF THE OTHER END OF THE LINE
LINE NUMBER

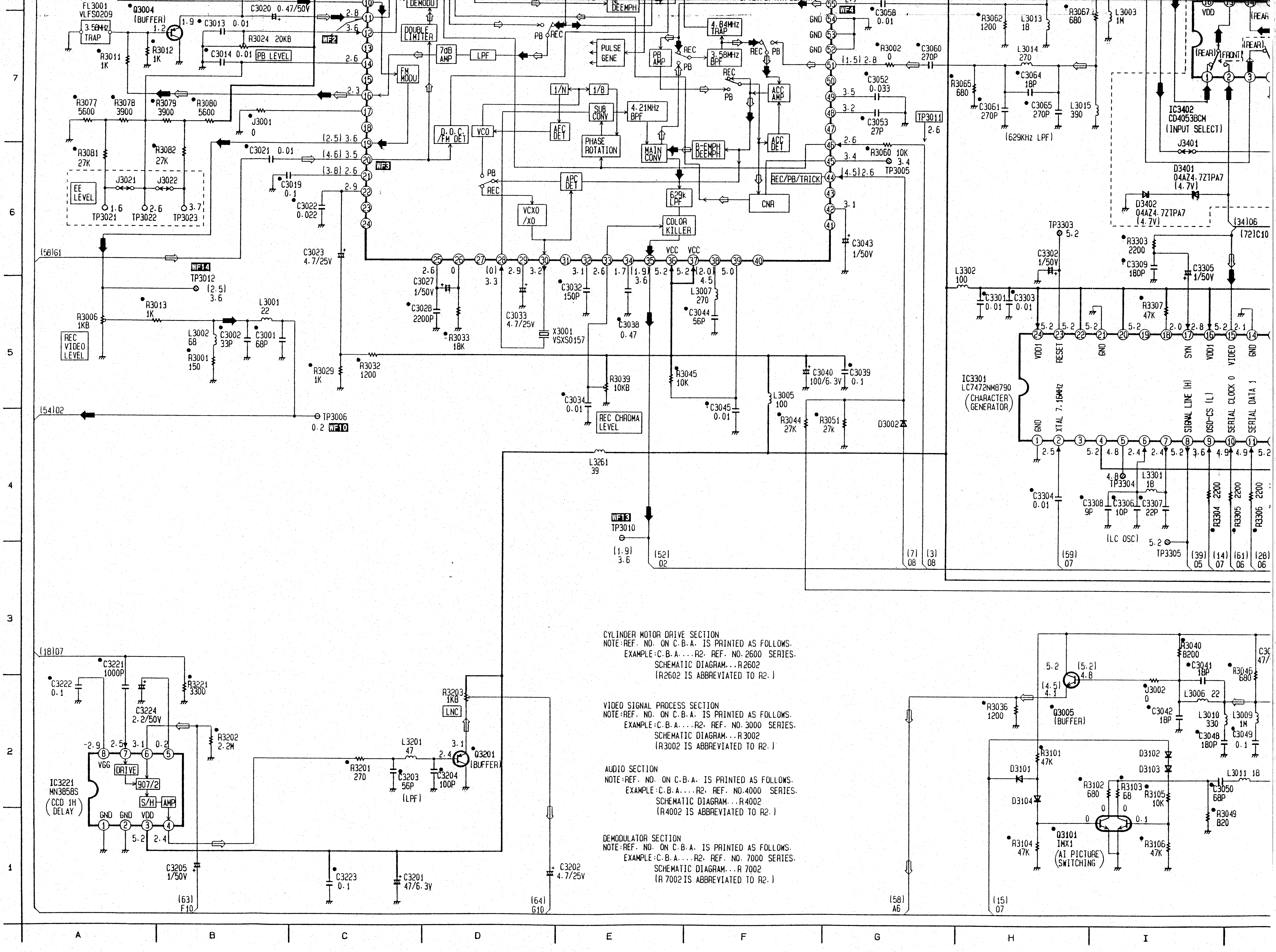
NOTE:
1. DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.
2. TO MAINTAIN ORIGINAL FUNCTION AND RELIABILITY OF REPAIRED UNITS, USE ONLY ORIGINAL REPLACEMENT PARTS WHICH ARE LISTED WITH THEIR PART NUMBERS IN THE PARTS LIST SECTION OF THE SERVICE MANUAL.

IMPORTANT SAFETY I
COMPONENTS IDENTII
SPECIAL CHARACTER
WHEN REPLACING AN'
USE ONLY THE SPEC

◀ REC VIDEO SIGNAL ⇦ PB VIDEO SIGNAL ◀ REC AUDIO SIGNAL ◁ PB AUDIO SIGNAL ▨ CYLINDER SERVO



10
9
8
7
6
(72) J6
(11) 07
(66) J10
(65) K6
(12) 07
(63) B1
(64) D1
(57) L5
(20) 07
(53) 02
L3012 47
JK3001
VIDEO
IN
OUT
IN
C3015 56P
R3028 8200
R3019 680
C3016 1/50V
R3027 1K
C3010 120P
C3011 330P
R3020 3900
(MAIN DE-EMPHASIS)
IC3001 TA8843AFA
(LUMINANCE /CHROMINANCE MAIN PROCESS)
C3030 100/6.3V
C3029 0.1
R3038 390K
C3035 4.7/25V
R3037 560K
WF11 TP3007
C3025 10/16V
C3031 10/16V
R3034 4700
C3036 0.33 /50V
C3037 4.7/25V
R3066 10K
R3068 3300
C3066 0.01
R3076 75
TP4001
D3007 04AZ4.7ZTPA7 (4.7V)
D3008 04AZ4.7ZTPA7 (4.7V)
R3050 560K
WF12 TP3008 2.8
DL3001 VLDS0049
COMB FILTER
IN OUT GND
R4020 560
R3021 3900
(2.6) TP3003 3.0
R3009 5600
C3012 180P
R3023 1100
R3022 5600
DEVIATION
R3010 5KB
R3017 12K
R3016 5KB
C3017 0.1
R3018 1800
SYNC TIP FREQ
FL3001 VLFS0209
3.58MHz TRAP
Q3004 (BUFFER)
C3013 0.01
C3020 0.47/50V
R3024 20KB
R3012 1K
R3011 1K
C3014 0.01
PB LEVEL
WF1 WF2 WF3 WF4 WF5 WF6 WF7 WF9
12dB AMP
1/2fH SHIFT
MAIN EMPH
AGC
AGC DET
TUNER
LINE
NL-EMPH
LNC /DOC
PIC CONTROL
NOISE CANCELLER
DETAIL ENHANCER /NOISE CANCELLER
ART V/H SYNC MIX
LPF
SYNC SEP
NL-DEEMPH
FM DEMODU
DOUBLE LIMITER
7dB AMP
FM MODU
4.84MHz TRAP
3.58MHz BPF
PULSE GENE
PB AMP
ACC AMP
1/N
1/8
AFC DET
SUB CONV
4.21MHz BPF
PHASE ROTATION
MAIN CONV
B-EMPH DEEMPH
ACC DET
D.O.C. /FM DET
VCO
APC DET
VCXO
629k LPF
REC/PB/TRICK
CNR
SP(L)/LP(M)/SLP(H)
GND
VCC
REC
PB
C3055 1/50V
C3056 0.1
C3057 0.01
C3058 0.01
R3002 0
C3060 270P
C3052 0.033
C3053 27P
R3060 10K
TP3005
TP3011 2.6
R3056 270
R3062 1200
L3013 18
R3067 680
L3003 1M
C3062 0.022
C3005 2700P
R3003 0
TP3002
R3075 75
C3402 0.1
L3014 270
C3064 18P
R3065 680
C3061 270P
C3065 270P
L3015 390
(629KHz LPF)
IC3402 CD4053BCM (INPUT SELECT)
J3401
D3401 04AZ4.7ZTPA7 (4.7V)
D3402 04AZ4.7ZTPA7
VDD
(REAR)
(FRONT)
R3077 5600
R3078 3900
R3079 3900
R3080 5600
J3001 0
R3081 27K
R3082 27K
C3021 0.01
C3019 0.1
C3022 0.022
EE LEVEL
J3021
J3022
TP3021
TP3022
TP3023


FL3001
VLFS0209
3.58MHz TRAP
Q3004 (BUFFER)
C3020 0.47/50V
C3013 0.01
R3024 20KB
C3014 0.01
PB LEVEL
R3011 1K
R3012 1K
R3077 5600
R3078 3900
R3079 3900
R3080 5600
J3001 0
C3021 0.01
R3081 27K
R3082 27K
EE LEVEL
J3021
J3022
TP3021
TP3022
TP3023
C3019 0.1
C3022 0.022
C3023 4.7/25V
DOUBLE LIMITER
7dB AMP
LPF
FM MODU
D.O.C /FM DET
VCO
1/N
1/8
AFC DET
SUB CONV
4.21MHz BPF
PHASE ROTATION
MAIN CONV
B-EMPH DEEMPH
APC DET
VCXO /XO
629k LPF
COLOR KILLER
PULSE GENE
PB AMP
4.84MHz TRAP
3.58MHz BPF
ACC AMP
ACC DET
CNR
REC/PB/TRICK
REC
PB
GND
VCC
C3027 1/50V
C3028 2200P
R3033 18K
C3033 4.7/25V
X3001 VSXS0157
C3032 150P
C3038 0.47
L3007 270
C3044 56P
C3043 1/50V
C3058 0.01
R3002 0
C3060 270P
C3052 0.033
C3053 27P
TP3011
R3060 10K
TP3005
R3062 1200
L3013 18
L3014 270
C3064 18P
R3065 680
C3061 270P
C3065 270P
L3015 390
(629KHz LPF)
R3067 680
L3003 1M
IC3402 CD4053BCM (INPUT SELECT)
J3401
D3401 04AZ4.7ZTPA7 (4.7V)
D3402 04AZ4.7ZTPA7 (4.7V)
REAR
FRONT
VDD
WF2
WF3
WF4
WF10
WF13
WF14
TP3012
R3013 1K
L3001 22
R3006 1KB
REC VIDEO LEVEL
L3002 68
C3002 33P
C3001 68P
R3001 150
R3029 1K
R3032 1200
R3039 10KB
C3034 0.01
REC CHROMA LEVEL
R3045 10K
C3045 0.01
C3040 100/6.3V
C3039 0.1
L3005 100
R3044 27K
R3051 27K
D3002
TP3006
L3261 39
TP3010
TP3303
C3302 1/50V
L3302 100
C3301 0.01
C3303 0.01
R3303 2200
C3309 180P
C3305 1/50V
R3307 47K
IC3301 LC7472NM8790 (CHARACTER GENERATOR)
VDD1
RESET
GND
SYN
VIDEO
XTAL 7.16MHz
SIGNAL LINE (H)
OSD-CS (L)
SERIAL CLOCK 0
SERIAL DATA 1
C3304 0.01
TP3304
L3301 18
C3308 9P
C3306 10P
C3307 22P
(LC OSC)
TP3305
R3304 2200
R3305 2200
R3306 2200
C3221 1000P
C3222 0.1
R3221 3300
C3224 2.2/50V
R3202 2.2M
IC3221 MN3858S (CCD 1H DELAY)
VGG
DRIVE
907/2
S/H
AMP
GND
VDD
C3205 1/50V
C3223 0.1
C3201 47/6.3V
C3202 4.7/25V
R3201 270
L3201 47
C3203 56P
(LPF)
C3204 100P
R3203 1KB
LNC
Q3201 (BUFFER)
R3036 1200
Q3005 (BUFFER)
R3040 8200
C3041 18P
R3046 680
J3002 0
L3006 22
C3042 18P
L3010 330
L3009 1M
C3048 180P
C3049 0.1
R3101 47K
D3101
D3102
D3103
D3104
R3102 680
R3103 68
R3105 10K
L3011 18
C3050 68P
R3049 820
Q3101 IMX1 (AI PICTURE SWITCHING)
R3104 47K
R3106 47K
A
B
C
D
E
F
G
H
I
1
2
3
4
5
6
7

CYLINDER MOTOR DRIVE SECTION
NOTE:REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE:C.B.A....R2. REF. NO.2600 SERIES.
SCHEMATIC DIAGRAM...R2602
(R2602 IS ABBREVIATED TO R2.)

VIDEO SIGNAL PROCESS SECTION
NOTE:REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE:C.B.A....R2. REF. NO.3000 SERIES.
SCHEMATIC DIAGRAM...R3002
(R3002 IS ABBREVIATED TO R2.)

AUDIO SECTION
NOTE:REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE:C.B.A....R2. REF. NO.4000 SERIES.
SCHEMATIC DIAGRAM...R4002
(R4002 IS ABBREVIATED TO R2.)

DEMODULATOR SECTION
NOTE:REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE:C.B.A....R2. REF. NO. 7000 SERIES.
SCHEMATIC DIAGRAM...R 7002
(R 7002 IS ABBREVIATED TO R2.)

VE/SIGNAL PROCESS/AUDIO) SCHEMATIC DIAGRAM (A, B, C, D)

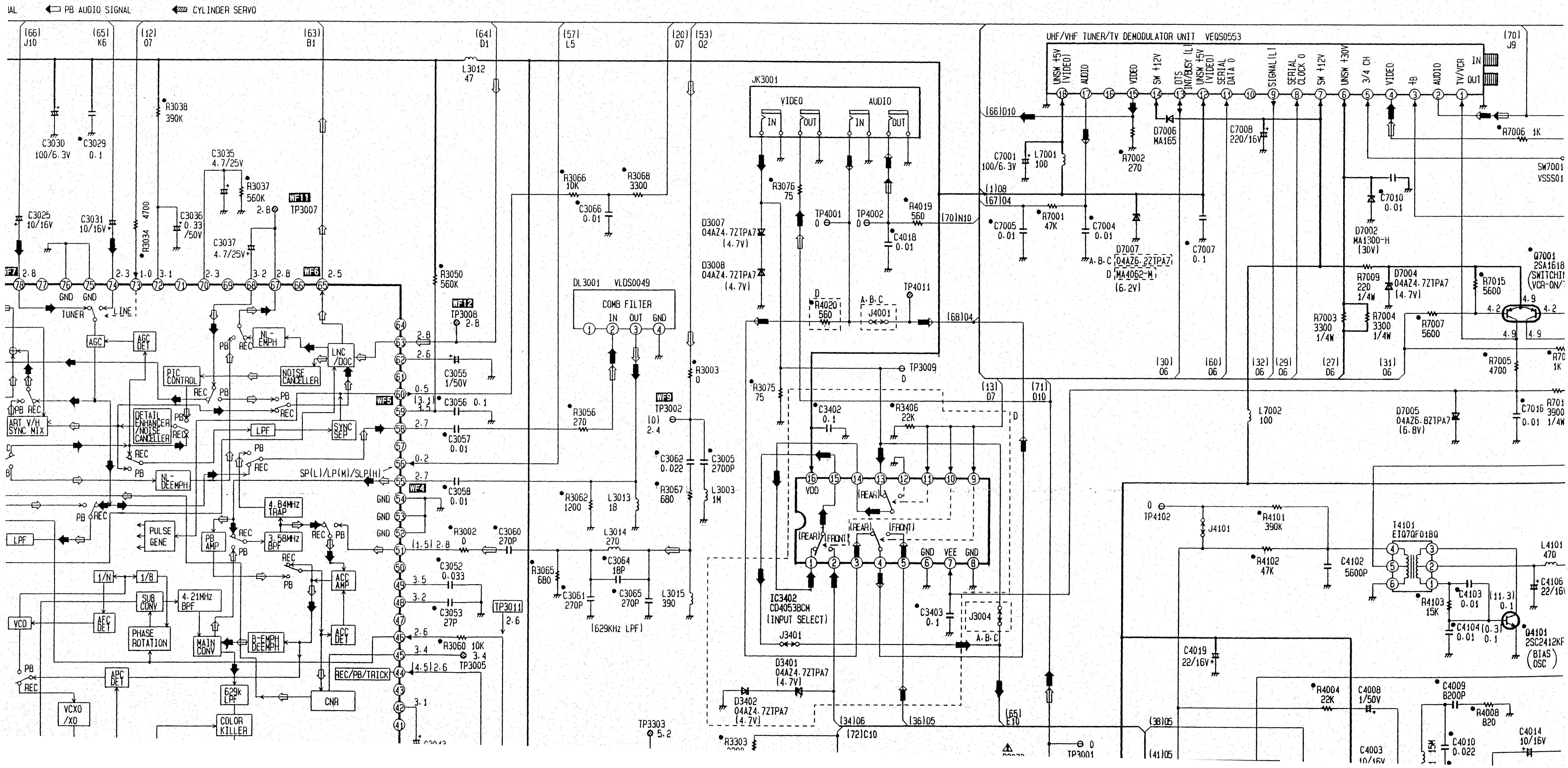
NOTE:

1. DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.
2. TO MAINTAIN ORIGINAL FUNCTION AND RELIABILITY OF REPAIRED UNITS, USE ONLY ORIGINAL REPLACEMENT PARTS WHICH ARE LISTED WITH THEIR PART NUMBERS IN THE PARTS LIST SECTION OF THE SERVICE MANUAL.

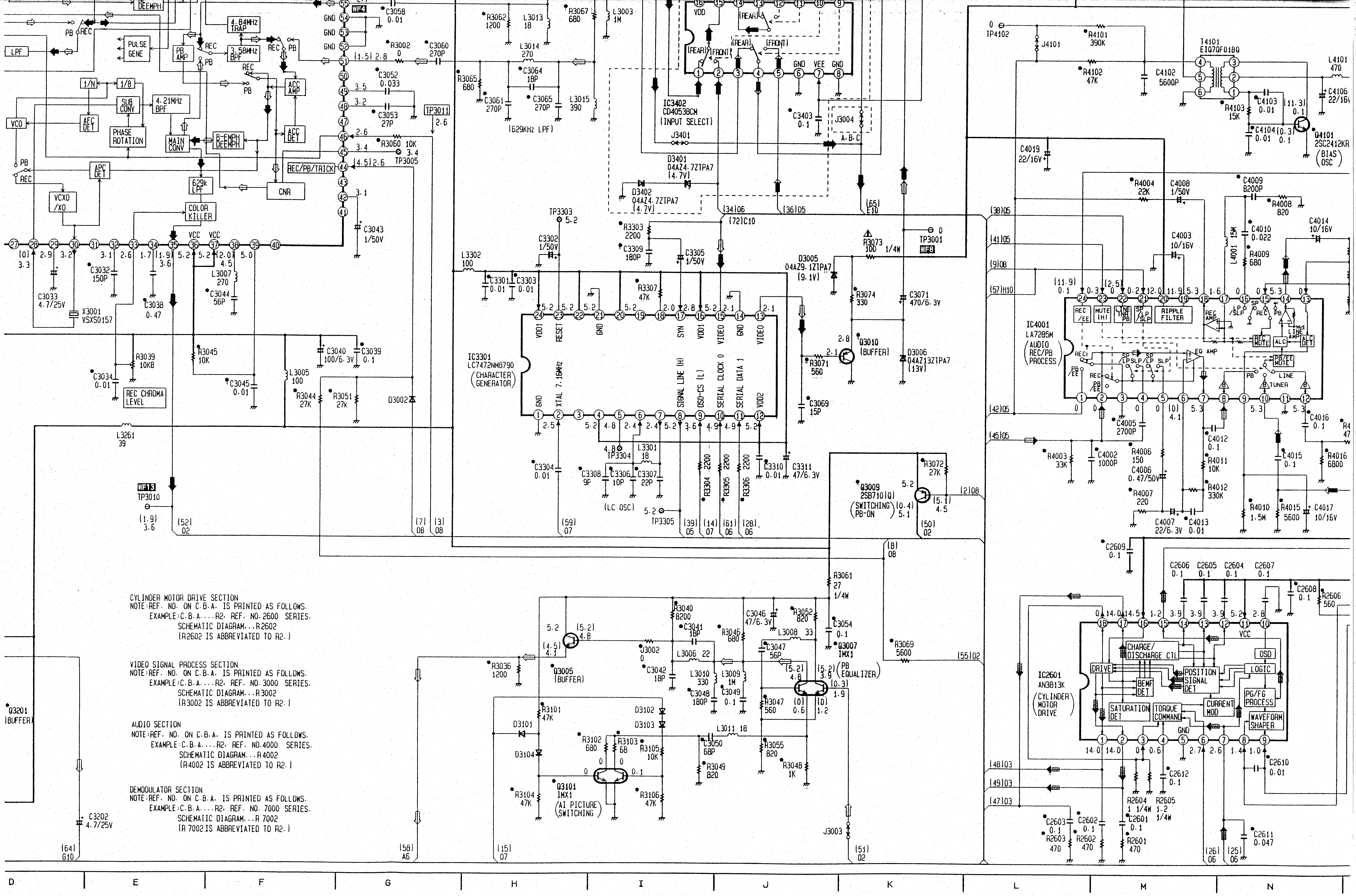
IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS,
USE ONLY THE SPECIFIED PARTS.

NOTE: THE MARK "•" INDICATES LEADLESS (CHIP) COMPONENTS.

TEST POI
⦶ : T
▭→ : T
⊘ : T
● : T



IAL
PB AUDIO SIGNAL
CYLINDER SERVO
(66) J10
(65) K6
(12) 07
(63) B1
(64) D1
(57) L5
(20) 07
(53) 02
(70) J9
UHF/VHF TUNER/TV DEMODULATOR UNIT VEQS0553
UNSW +5V (VIDEO)
AUDIO
VIDEO
SW +12V
DTS INT/BUSY (L)
UNSW +5V (VIDEO)
SERIAL DATA 0
SIGNAL (L)
SERIAL CLOCK 0
SW +12V
UNSW +30V
3/4 CH
VIDEO
+B
AUDIO
TV/VCR
IN
OUT
L3012 47
R3038 390K
C3030 100/6.3V
C3029 0.1
C3035 4.7/25V
R3037 560K
WF11 TP3007
2.8
C3025 10/16V
C3031 10/16V
R3034 4700
C3036 0.33/50V
C3037 4.7/25V
R3066 10K
R3068 3300
C3066 0.01
R3050 560K
WF12 TP3008 2.8
JK3001
VIDEO
AUDIO
IN
OUT
R3076 75
TP4001 0
TP4002 0
R4019 560
C4018 0.01
D3007 04AZ4.7ZTPA7 (4.7V)
D3008 04AZ4.7ZTPA7 (4.7V)
TP4011
D R4020 560
A, B, C J4001
(70) N10
(68) 04
(66) D10
(1) 08
(67) 04
C7001 100/6.3V
L7001 100
R7002 270
D7006 MA165
C7008 220/16V
R7006 1K
SW7001 VSS501
C7010 0.01
R7001 47K
C7005 0.01
C7004 0.01
D7007
A, B, C 04AZ6.2ZTPA7
D MA4062-M (6.2V)
C7007 0.1
D7002 MA1300-H (30V)
R7009 220 1/4W
D7004 04AZ4.7ZTPA7 (4.7V)
R7015 5600
Q7001 2SA1618 (SWITCHI VCR-ON/
R7003 3300 1/4W
R7004 3300 1/4W
R7007 5600
4.2
4.9
R7005 4700
R70 1K
(30) 06
(60) 06
(32) 06
(29) 06
(27) 06
(31) 06
WF7 2.8
2.3
1.0
3.1
2.3
3.2
2.8
WF6 2.5
GND
TUNER
LINE
AGC
AGC DET
NL-EMPH
LNC/DOC
PIC CONTROL
NOISE CANCELLER
DETAIL ENHANCER /NOISE CANCELLER
SYNC SEP
LPF
ART V/H SYNC MIX
PB
REC
NL-DEEMPH
4.84MHz TRAP
PULSE GENE
PB AMP
3.58MHz BPF
ACC AMP
ACC DET
1/N
1/8
SUB CONV
4.21MHz BPF
AFC DET
PHASE ROTATION
MAIN CONV
B-EMPH DEEMPH
VCO
APC DET
629k LPF
CNR
REC/PB/TRICK
VCXO /XO
COLOR KILLER
SP(L)/LP(M)/SLP(H)
C3055 1/50V
C3056 0.1
WF5
C3057 0.01
C3058 0.01
WF4
R3002 0
C3060 270P
C3052 0.033
C3053 27P
TP3011 2.6
R3060 10K
TP3005
DL3001 VLDS0049
COMB FILTER
IN OUT GND
R3056 270
R3003 0
WF9 TP3002 (0) 2.4
C3062 0.022
C3005 2700P
R3067 680
L3003 1M
R3062 1200
L3013 18
L3014 270
C3064 18P
R3065 680
C3061 270P
C3065 270P
L3015 390
(629KHz LPF)
TP3303 5.2
R3303
TP3009 0
R3075 75
C3402 0.1
R3406 22K
(13) 07
(71) D10
VDD
(REAR)
(FRONT)
GND VEE GND
IC3402 CD4053BCM (INPUT SELECT)
J3401
C3403 0.1
J3004 A, B, C
D3401 04AZ4.7ZTPA7 (4.7V)
D3402 04AZ4.7ZTPA7 (4.7V)
(34) 06
(36) 05
(72) C10
(65) E10
TP3001 0
L7002 100
D7005 04AZ6.8ZTPA7 (6.8V)
C7016 0.01
R701 3900 1/4W
TP4102 0
J4101
R4101 390K
R4102 47K
C4102 5600P
T4101 EI070F018Q
L4101 470
C4106 22/16
C4103 0.01
R4103 15K
C4104 0.01
Q4101 2SC2412KF (BIAS OSC)
C4019 22/16V
R4004 22K
C4008 1/50V
C4009 8200P
R4008 820
C4014 10/16V
C4003 10/16V
C4010 0.022
(38) 05
(41) 05


IC3402
CD4053BCM
(INPUT SELECT)
IC3301
LC7472NM8790
(CHARACTER GENERATOR)
IC4001
LA7285M
(AUDIO REC/PB PROCESS)
IC2601
AN3813K
(CYLINDER MOTOR DRIVE)
Q3010 (BUFFER)
Q3009 2SB710(Q) (SWITCHING PB-ON)
Q3005 (BUFFER)
Q3007 IMX1 (PB EQUALIZER)
Q3101 IMX1 (AI PICTURE SWITCHING)
Q4101 2SC2412KR (BIAS OSC)
Q3201 (BUFFER)
T4101 EI070F018Q
X3001 VSXS0157
PULSE GENE
4.84MHz TRAP
3.58MHz BPF
PB AMP
ACC AMP
ACC DET
SUB CONV
4.21MHz BPF
PHASE ROTATION
MAIN CONV
B-EMPH DEEMPH
AFC DET
APC DET
VCXO /XO
629k LPF
COLOR KILLER
CNR
REC/PB/TRICK
REC CHROMA LEVEL
(629KHz LPF)
(LC OSC)
CHARGE/DISCHARGE CTL
DRIVE
BEMF DET
POSITION SIGNAL DET
LOGIC
OSD
PG/FG PROCESS
SATURATION DET
TORQUE COMMAND
CURRENT MOD
WAVEFORM SHAPER
REC/EE
MUTE (H)
RIPPLE FILTER
REC AMP
EQ AMP
ALC
PB/EE MUTE
TP3001
TP3005
TP3010
TP3011
TP3303
TP3304
TP3305
TP4102
WF4
WF8
WF13
D
E
F
G
H
I
J
K
L
M
N

CYLINDER MOTOR DRIVE SECTION
NOTE:REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE:C.B.A....R2, REF. NO.2600 SERIES.
SCHEMATIC DIAGRAM...R2602
(R2602 IS ABBREVIATED TO R2.)

VIDEO SIGNAL PROCESS SECTION
NOTE:REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE:C.B.A....R2, REF. NO. 3000 SERIES.
SCHEMATIC DIAGRAM...R3002
(R3002 IS ABBREVIATED TO R2.)

AUDIO SECTION
NOTE:REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE:C.B.A....R2, REF. NO.4000 SERIES.
SCHEMATIC DIAGRAM...R4002
(R4002 IS ABBREVIATED TO R2.)

DEMODULATOR SECTION
NOTE:REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE:C.B.A....R2, REF. NO. 7000 SERIES.
SCHEMATIC DIAGRAM...R 7002
(R 7002 IS ABBREVIATED TO R2.)

AGRAM (A, B, C, D)

ICE:
] BY THE SIGN ⚠ HAVE
ICS IMPORTANT FOR SAFETY.
= THESE COMPONENTS.
ED PARTS.

NOTE: THE MARK "•" INDICATES LEADLESS
(CHIP) COMPONENTS.

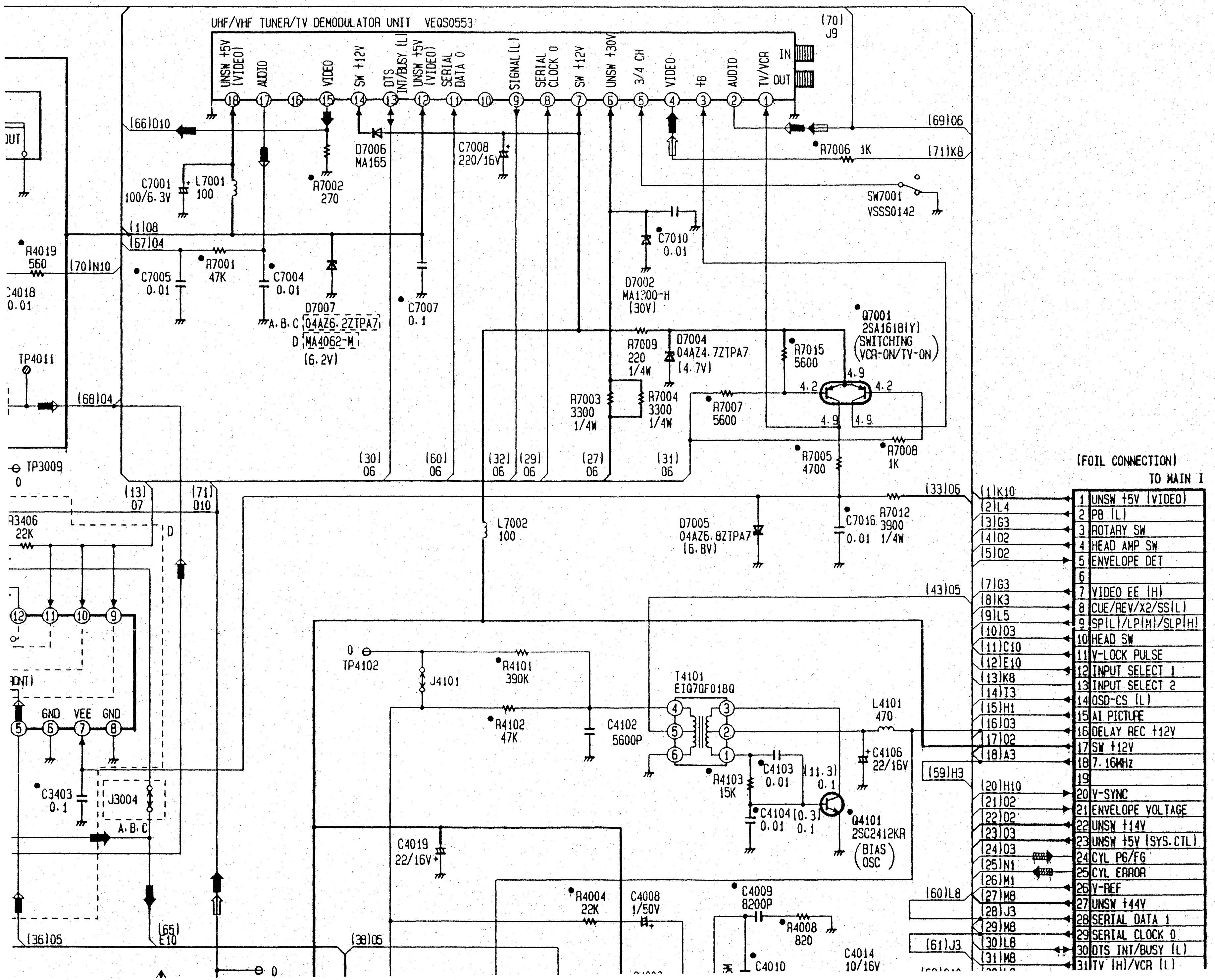
TEST POINT INFORMATION
ⓘ : TEST POINT WITH A JUMPER WIRE ACROSS A HOLE IN THE P.C.B.
▭→ : TEST POINT WITH A COMPONENT LEAD ON THE FOIL SIDE.
⊘ : TEST POINT WITH NO TEST PIN.
● : TEST POINT WITH A TEST PIN.

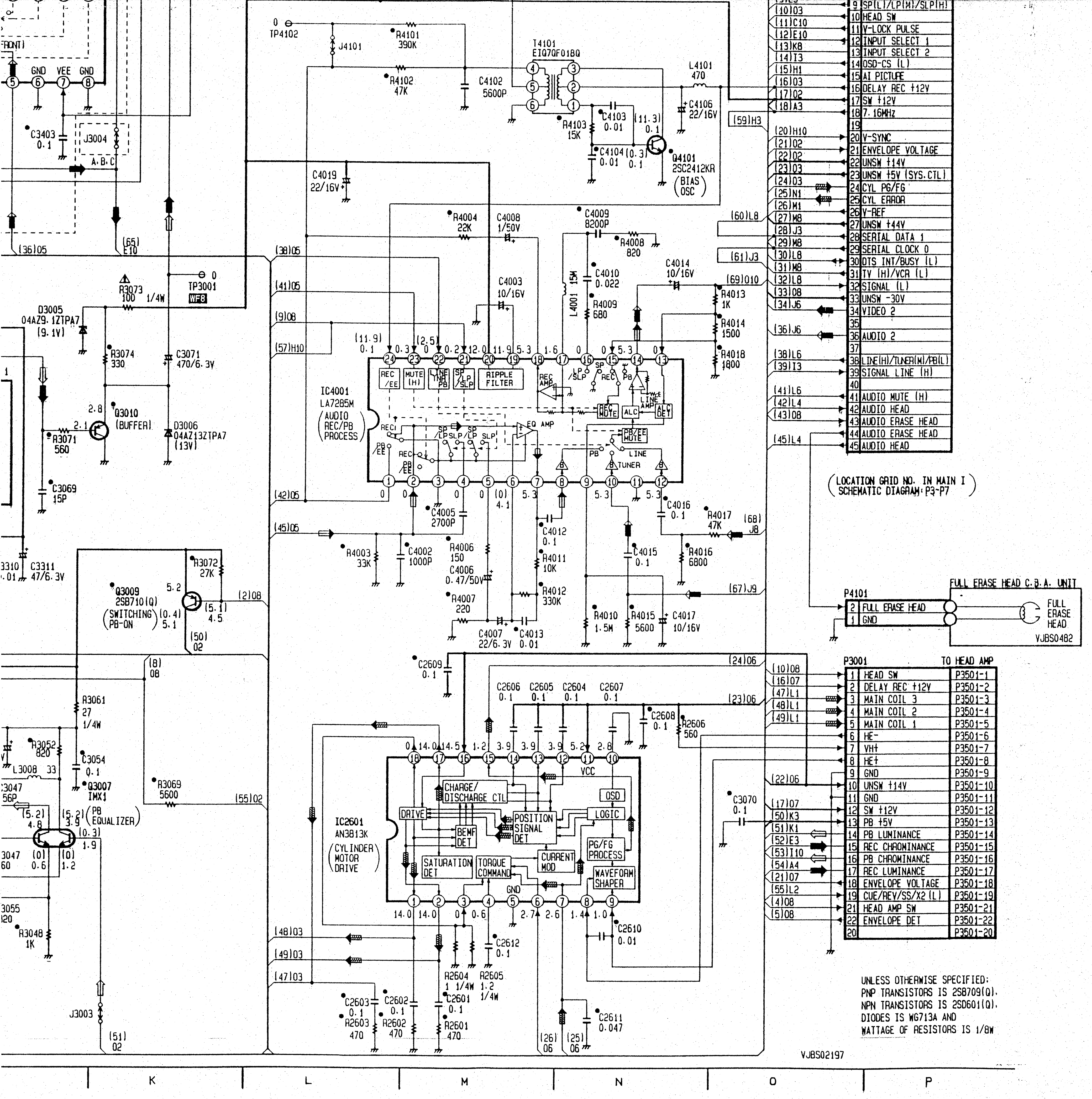
COMPARISON CHART
OF MODELS & MARKS

MODEL	MARK
PV-4308	A
PV-4311	B
PV-4311-K	C
PV-4315S	D
PV-4325S	E
PV-4351	F
PV-4351-K	G
PV-4358	H
PV-4355S	I

CYLINDER DRIVE SECTION	
IC	
IC2601	L-2

VIDEO SIGNAL PROCESS SECTION	
TRANSISTOR	
Q3004	A-8
Q3005	H-2
Q3007	K-2
Q3009	K-4
Q3010	K-5
Q3101	H-1
Q3201	D-2
IC	
IC3001	C-9
IC3221	A-2
IC3301	H-5
IC3402	I-7
CONNECTOR	
P3001	O-3
TEST POINT	
TP3001	K-6
TP3002	H-8
TP3003	B-9
TP3005	G-6
TP3006	C-4
TP3007	F-9
TP3008	G-9
TP3009	J-8
TP3010	E-4
TP3011	G-7
TP3012	B-5
TP3021	A-6


UHF/VHF TUNER/TV DEMODULATOR UNIT VEQS0553
(70) J9
UNSW +5V (VIDEO)
AUDIO
VIDEO
SW +12V
DTS INT/BUSY (L)
UNSW +5V (VIDEO)
SERIAL DATA 0
SIGNAL(L)
SERIAL CLOCK 0
SW +12V
UNSW +30V
3/4 CH
VIDEO
+B
AUDIO
TV/VCR
IN
OUT
(66)D10
(69)06
(71)K8
R7006 1K
D7006 MA165
C7008 220/16V
C7001 100/6.3V
L7001 100
R7002 270
SW7001 VSSS0142
C7010 0.01
D7002 MA1300-H (30V)
(1)08
(67)04
R4019 560
(70)N10
C7005 0.01
R7001 47K
C7004 0.01
D7007
A.B.C 04AZ6.2ZTPA7
D MA4062-M
(6.2V)
C7007 0.1
R7009 220 1/4W
D7004 04AZ4.7ZTPA7 (4.7V)
R7015 5600
Q7001 2SA1618(Y) (SWITCHING (VCR-ON/TV-ON)
4.2
4.9
R7003 3300 1/4W
R7004 3300 1/4W
R7007 5600
R7005 4700
R7008 1K
TP4011
(68)04
(30) 06
(60) 06
(32) 06
(29) 06
(27) 06
(31) 06
TP3009
(13) 07
(71) 010
R3406 22K
L7002 100
D7005 04AZ6.8ZTPA7 (6.8V)
C7016 0.01
R7012 3900 1/4W
(33)06
(43)05
GND VEE GND
C3403 0.1
J3004
A.B.C
TP4102
J4101
R4101 390K
R4102 47K
C4102 5600P
T4101 EI7QF018Q
L4101 470
C4106 22/16V
C4103 0.01
R4103 15K
C4104 0.01
(11.3) 0.1
(10.3) 0.1
Q4101 2SC2412KR (BIAS OSC)
(59)H3
C4019 22/16V
R4004 22K
C4008 1/50V
C4009 8200P
R4008 820
C4014 10/16V
C4010
(60)L8
(61)J3
(36)05
(65) E10
(38)05
(FOIL CONNECTION)
TO MAIN I
(1)K10
(2)L4
(3)G3
(4)02
(5)02
(7)G3
(8)K3
(9)L5
(10)03
(11)C10
(12)E10
(13)K8
(14)I3
(15)H1
(16)03
(17)02
(18)A3
(20)H10
(21)02
(22)02
(23)03
(24)03
(25)N1
(26)M1
(27)M8
(28)J3
(29)M8
(30)L8
(31)M8
1 UNSW +5V (VIDEO)
2 PB (L)
3 ROTARY SW
4 HEAD AMP SW
5 ENVELOPE DET
6
7 VIDEO EE (H)
8 CUE/REV/X2/SS(L)
9 SP(L)/LP(M)/SLP(H)
10 HEAD SW
11 V-LOCK PULSE
12 INPUT SELECT 1
13 INPUT SELECT 2
14 OSD-CS (L)
15 AI PICTURE
16 DELAY REC +12V
17 SW +12V
18 7.16MHz
19
20 V-SYNC
21 ENVELOPE VOLTAGE
22 UNSW +14V
23 UNSW +5V (SYS.CTL)
24 CYL PG/FG
25 CYL ERROR
26 V-REF
27 UNSW +44V
28 SERIAL DATA 1
29 SERIAL CLOCK 0
30 DTS INT/BUSY (L)
31 TV (H)/VCR (L)


TP4102
J4101
R4101 390K
R4102 47K
C4102 5600P
T4101 EIQ70F01BQ
L4101 470
C4106 22/16V
C4103 0.01
R4103 15K
C4104 0.01
Q4101 2SC2412KR (BIAS OSC)
C4019 22/16V
R4004 22K
C4008 1/50V
C4009 8200P
R4008 820
C4003 10/16V
L4001 15M
C4010 0.022
R4009 680
C4014 10/16V
R4013 1K
R4014 1500
R4018 1800
IC4001 LA7285M (AUDIO REC/PB PROCESS)
REC /EE
MUTE (H)
LINE TNR PB
SP /LP /SLP
RIPPLE FILTER
REC AMP
LP /SLP
LINE AMP
REC MUTE
ALC
ALC DET
EQ AMP
PB/EE MUTE
LINE
TUNER
C4005 2700P
C4002 1000P
R4003 33K
R4006 150
C4006 0.47/50V
R4007 220
C4007 22/6.3V
C4013 0.01
C4012 0.1
R4011 10K
R4012 330K
R4010 1.5M
R4015 5600
C4017 10/16V
C4015 0.1
C4016 0.1
R4017 47K
R4016 6800
P4101
2 FULL ERASE HEAD
1 GND
FULL ERASE HEAD C.B.A. UNIT
FULL ERASE HEAD
VJBS0482
GND VEE GND
C3403 0.1
J3004
R3073 100 1/4W
TP3001 WF8
D3005 04AZ9.1ZTPA7 (9.1V)
R3074 330
C3071 470/6.3V
Q3010 (BUFFER)
R3071 560
D3006 04AZ13ZTPA7 (13V)
C3069 15P
C3311 47/6.3V
R3072 27K
Q3009 2SB710(Q) (SWITCHING PB-ON)
R3061 27 1/4W
R3052 820
L3008 33
C3054 0.1
Q3007 IMX1 (PB EQUALIZER)
R3069 5600
R3048 1K
J3003
C2609 0.1
C2606 0.1
C2605 0.1
C2604 0.1
C2607 0.1
C2608 0.1
R2606 560
IC2601 AN3813K (CYLINDER MOTOR DRIVE)
CHARGE/ DISCHARGE CTL
DRIVE
BEMF DET
POSITION SIGNAL DET
OSD
LOGIC
VCC
SATURATION DET
TORQUE COMMAND
CURRENT MOD
PG/FG PROCESS
WAVEFORM SHAPER
GND
C2610 0.01
C2612 0.1
R2604 1 1/4W
R2605 1.2 1/4W
C2601 0.1
R2601 470
C2603 0.1
R2603 470
C2602 0.1
R2602 470
C2611 0.047
C3070 0.1
9 SP(L)/LP(M)/SLP(H)
10 HEAD SW
11 V-LOCK PULSE
12 INPUT SELECT 1
13 INPUT SELECT 2
14 OSD-CS (L)
15 AI PICTURE
16 DELAY REC +12V
17 SW +12V
18 7.16MHz
19
20 V-SYNC
21 ENVELOPE VOLTAGE
22 UNSW +14V
23 UNSW +5V (SYS.CTL)
24 CYL PG/FG
25 CYL ERROR
26 V-REF
27 UNSW +44V
28 SERIAL DATA 1
29 SERIAL CLOCK 0
30 DTS INT/BUSY (L)
31 TV (H)/VCR (L)
32 SIGNAL (L)
33 UNSW -30V
34 VIDEO 2
35
36 AUDIO 2
37
38 LINE(H)/TUNER(M)/PB(L)
39 SIGNAL LINE (H)
40
41 AUDIO MUTE (H)
42 AUDIO HEAD
43 AUDIO ERASE HEAD
44 AUDIO ERASE HEAD
45 AUDIO HEAD
P3001
TO HEAD AMP
1 HEAD SW P3501-1
2 DELAY REC +12V P3501-2
3 MAIN COIL 3 P3501-3
4 MAIN COIL 2 P3501-4
5 MAIN COIL 1 P3501-5
6 HE- P3501-6
7 VH+ P3501-7
8 HE+ P3501-8
9 GND P3501-9
10 UNSW +14V P3501-10
11 GND P3501-11
12 SW +12V P3501-12
13 PB +5V P3501-13
14 PB LUMINANCE P3501-14
15 REC CHROMINANCE P3501-15
16 PB CHROMINANCE P3501-16
17 REC LUMINANCE P3501-17
18 ENVELOPE VOLTAGE P3501-18
19 CUE/REV/SS/X2 (L) P3501-19
21 HEAD AMP SW P3501-21
22 ENVELOPE DET P3501-22
20 P3501-20
VJBS02197
K
L
M
N
O
P

(LOCATION GRID NO. IN MAIN I SCHEMATIC DIAGRAM: P3~P7)

UNLESS OTHERWISE SPECIFIED:
PNP TRANSISTORS IS 2SB709(Q).
NPN TRANSISTORS IS 2SD601(Q).
DIODES IS MA6713A AND
WATTAGE OF RESISTORS IS 1/8W

IC3301	H-5
IC3402	I-7
CONNECTOR	
P3001	0-3
TEST POINT	
TP3001	K-6
TP3002	H-8
TP3003	B-9
TP3005	G-6
TP3006	C-4
TP3007	F-9
TP3008	G-9
TP3009	J-8
TP3010	E-4
TP3011	G-7
TP3012	B-5
TP3021	A-6
TP3022	A-6
TP3023	B-6
TP3303	H-6
TP3304	I-4
TP3305	I-4
ADJUSTMENT	
R3006	A-5
R3010	A-8
R3016	B-8
R3024	B-7
R3039	E-5
R3203	D-2

AUDIO SECTION

TRANSISTOR	
Q4101	N-7
IC	
IC4001	L-5
CONNECTOR	
P4101	0-4
TEST POINT	
TP4001	J-9
TP4002	J-9
TP4011	J-9
TP4102	L-7

DEMODULATOR SECTION

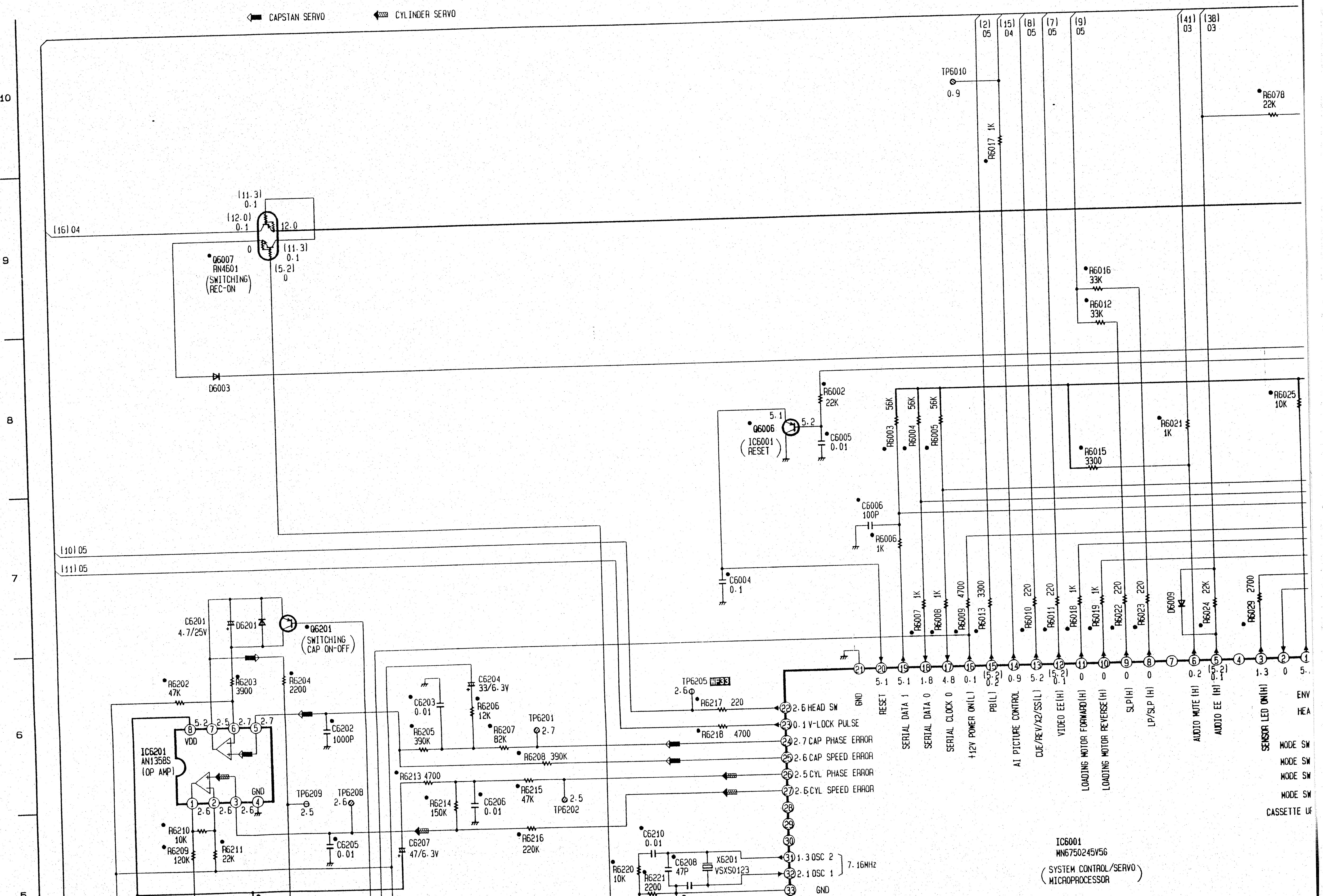
TRANSISTOR	
Q7001	N-9

MAIN I (POWER SUPPLY/SYSTEM CONTROL/SERVO) SCHEMATIC DIAG

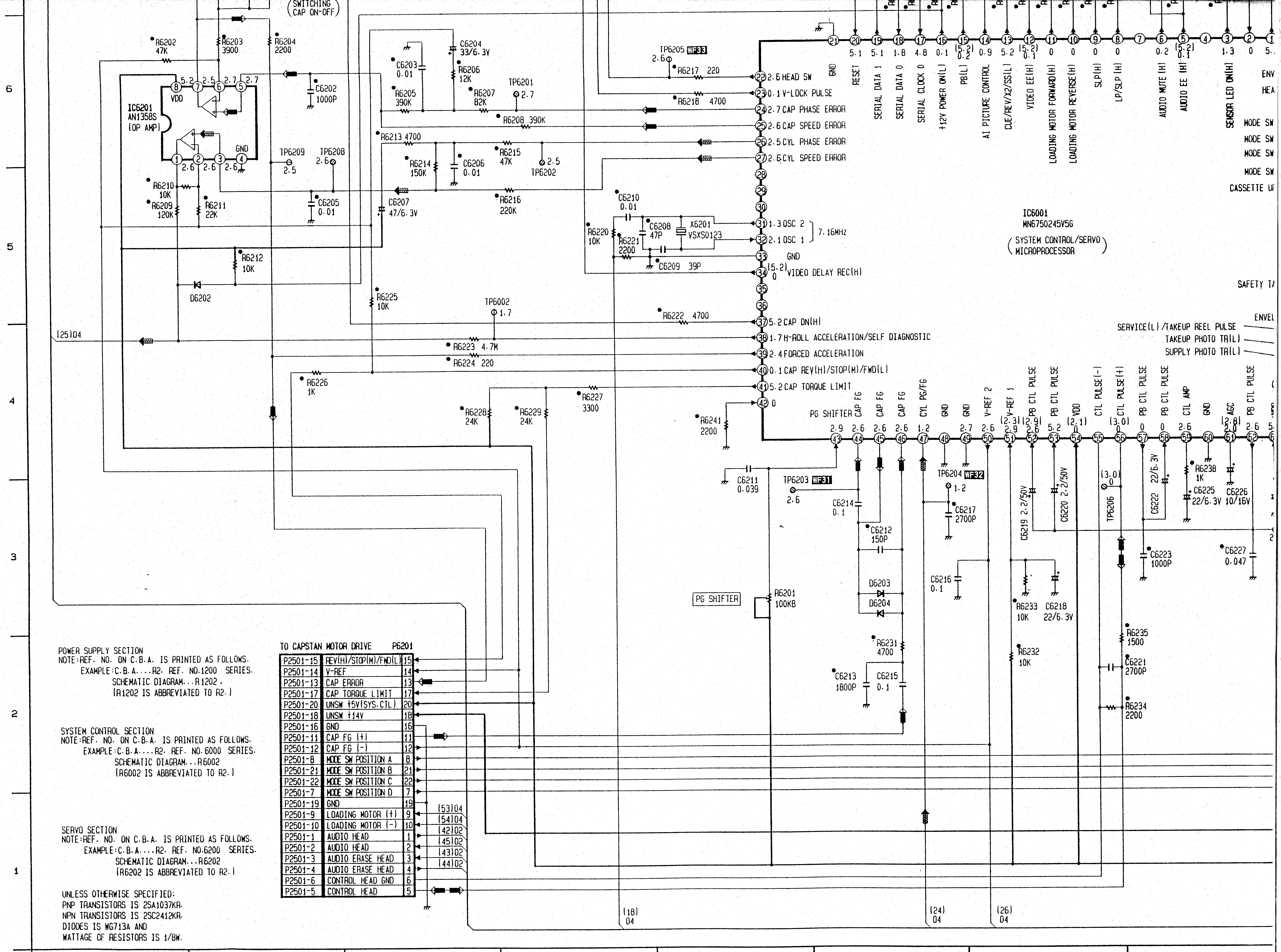
NOTE: HOW TO READ CONVERGED LINES
(100) B4
LOCATION GRID NUMBER OF THE OTHER END OF THE LINE
LINE NUMBER

NOTE:
1. DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.
2. TO MAINTAIN ORIGINAL FUNCTION AND RELIABILITY OF REPAIRED UNITS, USE ONLY ORIGINAL REPLACEMENT PARTS WHICH ARE LISTED WITH THEIR PART NUMBERS IN THE PARTS LIST SECTION OF THE SERVICE MANUAL.

IMPORTA
COMPONE
SPECIAL
WHEN RE
USE ONL



CAPSTAN SERVO
CYLINDER SERVO
10
9
8
7
6
5
(2) 05
(15) 04
(8) 05
(7) 05
(9) 05
(41) 03
(38) 03
TP6010
0.9
R6017 1K
R6078 22K
(16) 04
(11.3) 0.1
(12.0) 0.1
12.0
0
(11.3) 0.1
(5.2) 0
Q6007
RN4601
(SWITCHING REC-ON)
R6016 33K
R6012 33K
D6003
R6002 22K
5.1
5.2
Q6006
(IC6001 RESET)
C6005 0.01
R6003 56K
R6004 56K
R6005 56K
R6015 3300
R6021 1K
R6025 10K
C6006 100P
R6006 1K
(10) 05
(11) 05
C6004 0.1
R6007 1K
R6008 1K
R6009 4700
R6013 3300
R6010 220
R6011 220
R6018 1K
R6019 1K
R6022 220
R6023 220
D6009
R6024 22K
R6029 2700
C6201 4.7/25V
D6201
Q6201
(SWITCHING CAP ON-OFF)
R6202 47K
R6203 3900
R6204 2200
C6204 33/6.3V
C6203 0.01
R6206 12K
R6205 390K
R6207 82K
TP6201 2.7
R6208 390K
TP6205 2.6
R6217 220
R6218 4700
C6202 1000P
IC6201
AN1358S
(OP AMP)
VDD
GND
5.2
2.5
2.7
2.7
2.6
2.6
2.6
TP6209 2.5
TP6208 2.6
R6213 4700
R6214 150K
C6206 0.01
R6215 47K
TP6202 2.5
R6216 220K
R6210 10K
R6209 120K
R6211 22K
C6205 0.01
C6207 47/6.3V
C6210 0.01
C6208 47P
X6201 VSXS0123
R6220 10K
R6221 2200
21 GND
20 5.1 RESET
19 5.1 SERIAL DATA 1
18 1.8 SERIAL DATA 0
17 4.8 SERIAL CLOCK 0
16 0.1 +12V POWER ON(L)
15 (5.2) 0.2 PB(L)
14 0.9 AI PICTURE CONTROL
13 5.2 CUE/REV/X2/SS(L)
12 (5.2) 0.1 VIDEO EE(H)
11 0 LOADING MOTOR FORWARD(H)
10 0 LOADING MOTOR REVERSE(H)
9 0 SLP(H)
8 0 LP/SLP (H)
7
6 0.2 AUDIO MUTE (H)
5 (5.2) 0.1 AUDIO EE (H)
4
3 1.3 SENSOR LED ON(H)
2 0
1 5..
ENV
HEA
MODE SW
MODE SW
MODE SW
MODE SW
CASSETTE UF
22 2.6 HEAD SW
23 0.1 V-LOCK PULSE
24 2.7 CAP PHASE ERROR
25 2.6 CAP SPEED ERROR
26 2.5 CYL PHASE ERROR
27 2.6 CYL SPEED ERROR
28
29
30
31 1.3 OSC 2
32 2.1 OSC 1
7.16MHz
33 GND
IC6001
MN6750245V5G
(SYSTEM CONTROL/SERVO MICROPROCESSOR)


SWITCHING (CAP ON-OFF)
IC6201 AN1358S (OP AMP)
VDD
GND
IC6001 MN6750245V5G
SYSTEM CONTROL/SERVO MICROPROCESSOR
2.6 HEAD SW
0.1 V-LOCK PULSE
2.7 CAP PHASE ERROR
2.6 CAP SPEED ERROR
2.5 CYL PHASE ERROR
2.6 CYL SPEED ERROR
1.3 OSC 2
2.1 OSC 1
7.16MHz
GND
VIDEO DELAY REC(H)
5.2 CAP ON(H)
1.7 H-ROLL ACCELERATION/SELF DIAGNOSTIC
2.4 FORCED ACCELERATION
0.1 CAP REV(H)/STOP(M)/FWD(L)
5.2 CAP TORQUE LIMIT
GND
RESET
SERIAL DATA 1
SERIAL DATA 0
SERIAL CLOCK 0
+12V POWER ON(L)
PB(L)
AI PICTURE CONTROL
CUE/REV/X2/SS(L)
VIDEO EE(H)
LOADING MOTOR FORWARD(H)
LOADING MOTOR REVERSE(H)
SLP(H)
LP/SLP (H)
AUDIO MUTE (H)
AUDIO EE (H)
SENSOR LED ON(H)
PG SHIFTER
CAP FG
CAP FG
CAP FG
CYL PG/FG
GND
GND
V-REF 2
V-REF 1
PB CTL PULSE
PB CTL PULSE
VDD
CTL PULSE(-)
CTL PULSE(+)
PB CTL PULSE
PB CTL PULSE
CTL AMP
GND
AGC
PB CTL PULSE
ENV
HEA
MODE SW
MODE SW
MODE SW
MODE SW
CASSETTE UP
SAFETY T
ENVEL
SERVICE(L)/TAKEUP REEL PULSE
TAKEUP PHOTO TR(L)
SUPPLY PHOTO TR(L)
TP6205 WF33
TP6201
TP6202
TP6208
TP6209
TP6002
TP6203 WF31
TP6204 WF32
TP6206
X6201 VSXS0123
D6202
D6203
D6204
R6201 100KB
(25)04
(18) 04
(24) 04
(26) 04
(53)04
(54)04
(42)02
(45)02
(43)02
(44)02
TO CAPSTAN MOTOR DRIVE P6201
A
B
C
D
E
F
G
H
1
2
3
4
5
6

POWER SUPPLY SECTION
NOTE:REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE:C.B.A....R2. REF. NO.1200 SERIES.
SCHEMATIC DIAGRAM...R1202.
(R1202 IS ABBREVIATED TO R2.)

SYSTEM CONTROL SECTION
NOTE:REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE:C.B.A....R2. REF. NO.6000 SERIES.
SCHEMATIC DIAGRAM...R6002
(R6002 IS ABBREVIATED TO R2.)

SERVO SECTION
NOTE:REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE:C.B.A....R2. REF. NO.6200 SERIES.
SCHEMATIC DIAGRAM...R6202
(R6202 IS ABBREVIATED TO R2.)

UNLESS OTHERWISE SPECIFIED:
PNP TRANSISTORS IS 2SA1037KR.
NPN TRANSISTORS IS 2SC2412KR.
DIODES IS WG713A AND
WATTAGE OF RESISTORS IS 1/8W.

TO CAPSTAN MOTOR DRIVE P6201

P2501-15	REV(H)/STOP(M)/FWD(L)	15
P2501-14	V-REF	14
P2501-13	CAP ERROR	13
P2501-17	CAP TORQUE LIMIT	17
P2501-20	UNSW +5V(SYS.CTL)	20
P2501-18	UNSW +14V	18
P2501-16	GND	16
P2501-11	CAP FG (+)	11
P2501-12	CAP FG (-)	12
P2501-8	MODE SW POSITION A	8
P2501-21	MODE SW POSITION B	21
P2501-22	MODE SW POSITION C	22
P2501-7	MODE SW POSITION D	7
P2501-19	GND	19
P2501-9	LOADING MOTOR (+)	9
P2501-10	LOADING MOTOR (-)	10
P2501-1	AUDIO HEAD	1
P2501-2	AUDIO HEAD	2
P2501-3	AUDIO ERASE HEAD	3
P2501-4	AUDIO ERASE HEAD	4
P2501-6	CONTROL HEAD GND	6
P2501-5	CONTROL HEAD	5

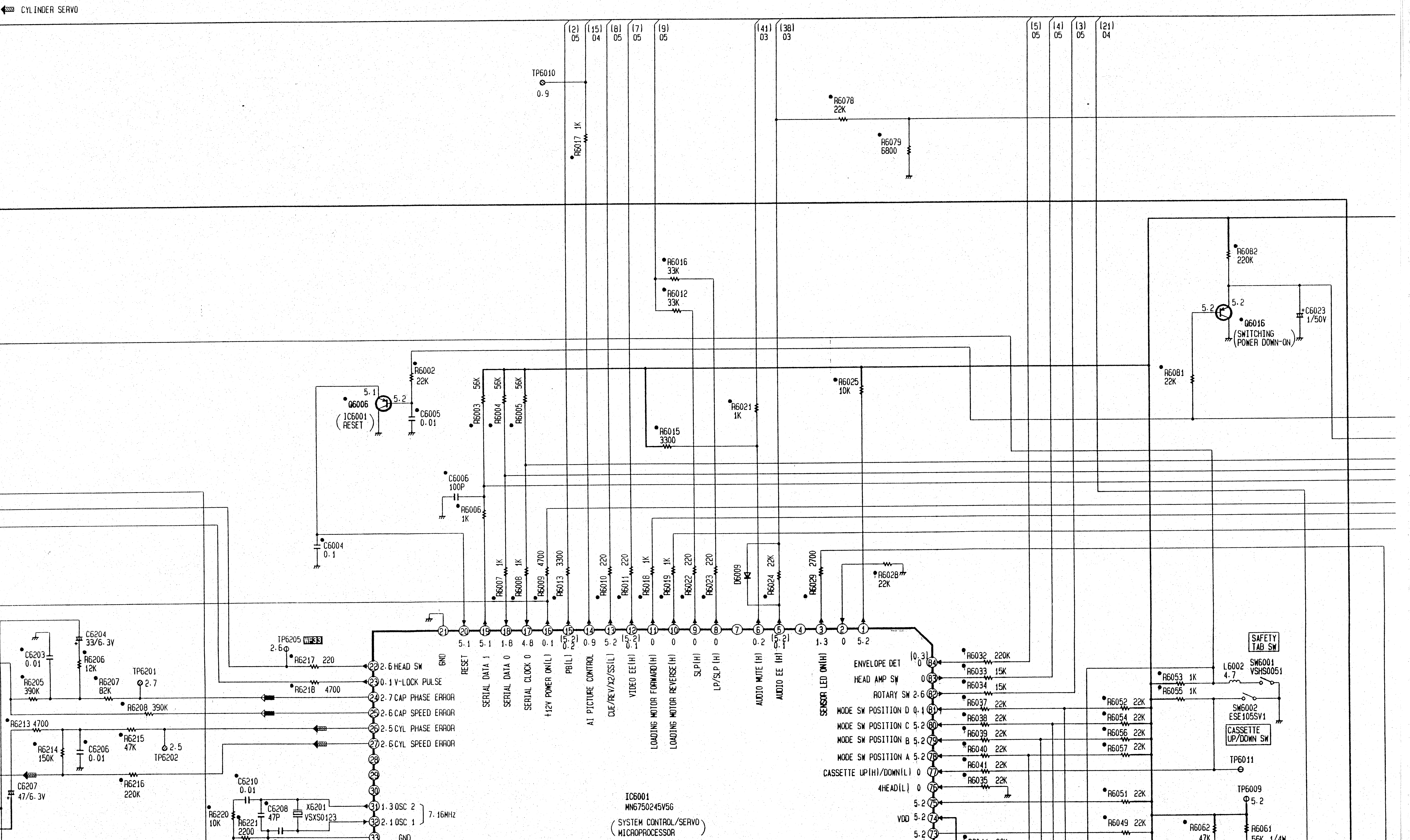
PPLY/SYSTEM CONTROL/SERVO) SCHEMATIC DIAGRAM (E)

F THE LINE

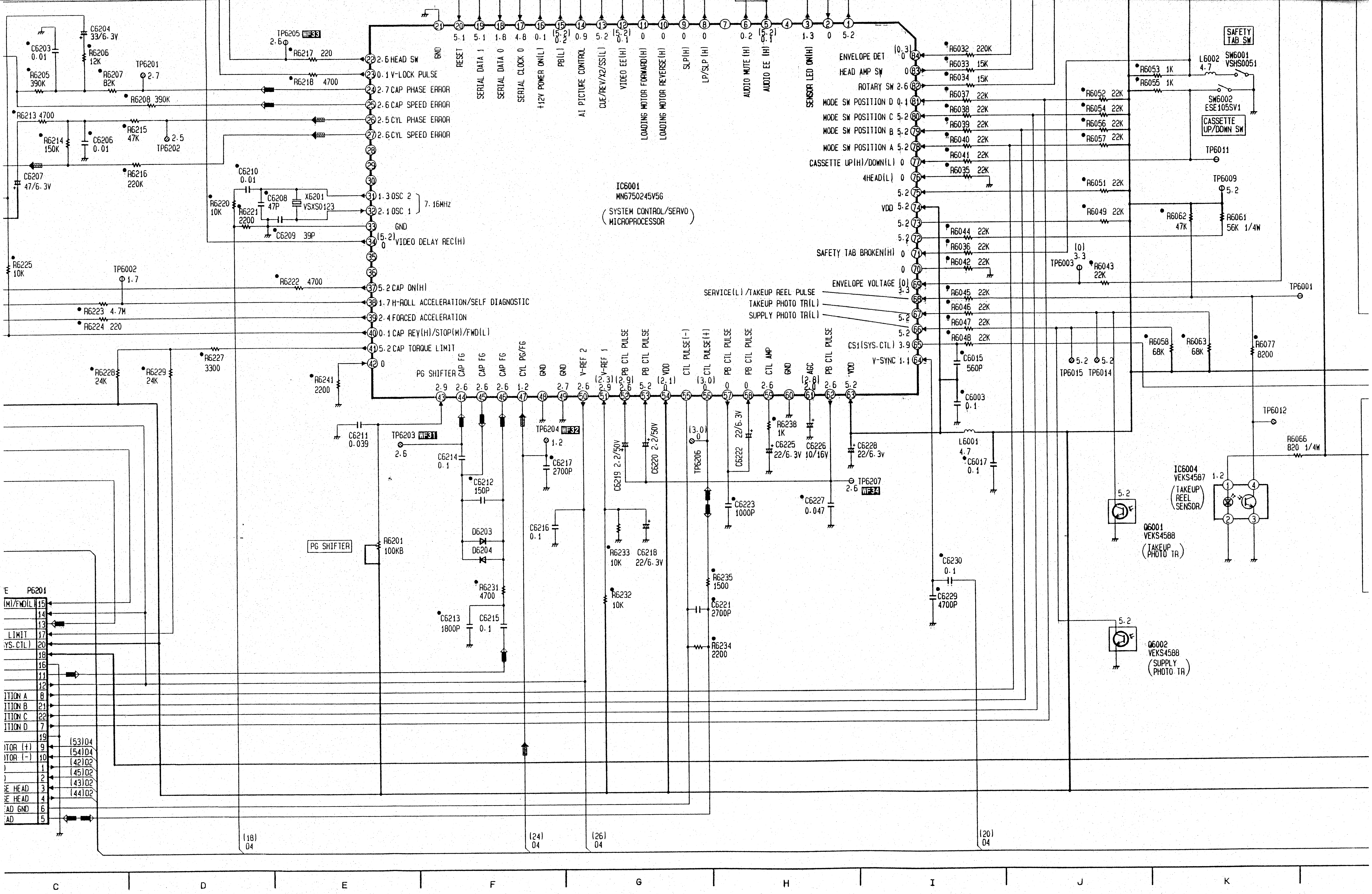
NOTE:
1. DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.
2. TO MAINTAIN ORIGINAL FUNCTION AND RELIABILITY OF REPAIRED UNITS, USE ONLY ORIGINAL REPLACEMENT PARTS WHICH ARE LISTED WITH THEIR PART NUMBERS IN THE PARTS LIST SECTION OF THE SERVICE MANUAL.

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

NOTE: THE MARK "•" INDICATES LEADLESS (CHIP) COMPONENTS.



CYLINDER SERVO
(2) 05
(15) 04
(8) 05
(7) 05
(9) 05
(41) 03
(38) 03
(5) 05
(4) 05
(3) 05
(21) 04
TP6010
0.9
R6017 1K
R6078 22K
R6079 6800
R6082 220K
5.2
5.2
Q6016 (SWITCHING POWER DOWN-ON)
C6023 1/50V
R6016 33K
R6012 33K
R6002 22K
5.1
5.2
Q6006 (IC6001 RESET)
C6005 0.01
R6003 56K
R6004 56K
R6005 56K
R6015 3300
R6021 1K
R6025 10K
R6081 22K
C6006 100P
R6006 1K
C6004 0.1
R6007 1K
R6008 1K
R6009 4700
R6013 3300
R6010 220
R6011 220
R6018 1K
R6019 1K
R6022 220
R6023 220
D6009
R6024 22K
R6029 2700
R6028 22K
5.1 5.1 1.8 4.8 0.1 (5.2) 0.2 0.9 5.2 (5.2) 0.1 0 0 0 0 0.2 (5.2) 0.1 1.3 0 5.2
GND
RESET
SERIAL DATA 1
SERIAL DATA 0
SERIAL CLOCK 0
+12V POWER ON(L)
PB(L)
AI PICTURE CONTROL
CUE/REV/X2/SS(L)
VIDEO EE(H)
LOADING MOTOR FORWARD(H)
LOADING MOTOR REVERSE(H)
SLP(H)
LP/SLP (H)
AUDIO MUTE (H)
AUDIO EE (H)
SENSOR LED ON(H)
C6204 33/6.3V
C6203 0.01
R6206 12K
R6205 390K
R6207 82K
TP6201 2.7
TP6205 WF33 2.6
R6217 220
R6218 4700
R6208 390K
R6213 4700
R6215 47K
2.5 TP6202
R6214 150K
C6206 0.01
C6207 47/6.3V
R6216 220K
C6210 0.01
C6208 47P
X6201 VSXS0123
R6220 10K
R6221 2200
22 2.6 HEAD SW
23 0.1 V-LOCK PULSE
24 2.7 CAP PHASE ERROR
25 2.6 CAP SPEED ERROR
26 2.5 CYL PHASE ERROR
27 2.6 CYL SPEED ERROR
28
29
30
31 1.3 OSC 2
32 2.1 OSC 1
7.16MHz
33 GND
IC6001 MN6750245V5G (SYSTEM CONTROL/SERVO MICROPROCESSOR)
ENVELOPE DET (0.3) 0 84
HEAD AMP SW 0 83
ROTARY SW 2.6 82
MODE SW POSITION D 0.1 81
MODE SW POSITION C 5.2 80
MODE SW POSITION B 5.2 79
MODE SW POSITION A 5.2 78
CASSETTE UP(H)/DOWN(L) 0 77
4HEAD(L) 0 76
5.2 75
VDD 5.2 74
5.2 73
R6032 220K
R6033 15K
R6034 15K
R6037 22K
R6038 22K
R6039 22K
R6040 22K
R6041 22K
R6035 22K
R6052 22K
R6054 22K
R6056 22K
R6057 22K
R6051 22K
R6049 22K
R6053 1K
R6055 1K
L6002 4.7
SAFETY TAB SW
SW6001 VSHS0051
SW6002 ESE105SV1
CASSETTE UP/DOWN SW
TP6011
TP6009 5.2
R6062 47K
R6061 56K 1/4W


IC6001
MN6750245V56
(SYSTEM CONTROL/SERVO MICROPROCESSOR)
21 GND
20 RESET 5.1
19 SERIAL DATA 1 5.1
18 SERIAL DATA 0 1.8
17 SERIAL CLOCK 0 4.8
16 +12V POWER ON(L) 0.1
15 PB(L) (5.2) 0.2
14 AI PICTURE CONTROL 0.9
13 CUE/REV/X2/SS(L) 5.2
12 VIDEO EE(H) (5.2) 0.1
11 LOADING MOTOR FORWARD(H) 0
10 LOADING MOTOR REVERSE(H) 0
9 SLP(H) 0
8 LP/SLP (H) 0
7
6 AUDIO MUTE (H) 0.2
5 AUDIO EE (H) (5.2) 0.1
4
3 SENSOR LED ON(H) 1.3
2 0
1 5.2
22 2.6 HEAD SW
23 0.1 V-LOCK PULSE
24 2.7 CAP PHASE ERROR
25 2.6 CAP SPEED ERROR
26 2.5 CYL PHASE ERROR
27 2.6 CYL SPEED ERROR
28
29
30
31 1.3 OSC 2
32 2.1 OSC 1
7.16MHz
33 GND
34 (5.2) 0 VIDEO DELAY REC(H)
35
36
37 5.2 CAP ON(H)
38 1.7 H-ROLL ACCELERATION/SELF DIAGNOSTIC
39 2.4 FORCED ACCELERATION
40 0.1 CAP REV(H)/STOP(M)/FWD(L)
41 5.2 CAP TORQUE LIMIT
42 0
43 PG SHIFTER 2.9
44 CAP FG 2.6
45 CAP FG 2.6
46 CAP FG 2.6
47 CYL PG/FG 1.2
48 GND
49 GND 2.7
50 V-REF 2 2.6
51 V-REF 1 (2.3) 2.9
52 PB CTL PULSE (2.9) 2.6
53 PB CTL PULSE 5.2
54 VDD (2.1) 0
55 CTL PULSE(-)
56 CTL PULSE(+) (3.0) 0
57 PB CTL PULSE 0
58 PB CTL PULSE 0
59 CTL AMP 2.6
60 GND
61 AGC (2.8) 2.0
62 PB CTL PULSE 2.6
63 VDD 5.2
84 ENVELOPE DET (0.3) 0
83 HEAD AMP SW 0
82 ROTARY SW 2.6
81 MODE SW POSITION D 0.1
80 MODE SW POSITION C 5.2
79 MODE SW POSITION B 5.2
78 MODE SW POSITION A 5.2
77 CASSETTE UP(H)/DOWN(L) 0
76 4HEAD(L) 0
75 5.2
74 VDD 5.2
73 5.2
72 5.2
71 SAFETY TAB BROKEN(H) 0
70 0
69 ENVELOPE VOLTAGE (0) 3.3
68 SERVICE(L)/TAKEUP REEL PULSE
67 TAKEUP PHOTO TR(L) 5.2
66 SUPPLY PHOTO TR(L) 5.2
65 CS1(SYS.CTL) 3.9
64 V-SYNC 1.1
C6204 33/6.3V
C6203 0.01
R6206 12K
R6205 390K
R6207 82K
TP6201 2.7
R6208 390K
TP6205 WF33 2.6
R6217 220
R6218 4700
R6213 4700
R6214 150K
C6206 0.01
R6215 47K
TP6202 2.5
R6216 220K
C6207 47/6.3V
C6210 0.01
C6208 47P
X6201 VSXS0123
R6220 10K
R6221 2200
C6209 39P
R6225 10K
TP6002 1.7
R6222 4700
R6223 4.7M
R6224 220
R6227 3300
R6228 24K
R6229 24K
R6241 2200
C6211 0.039
TP6203 WF31 2.6
C6214 0.1
C6212 150P
D6203
D6204
R6231 4700
C6213 1800P
C6215 0.1
TP6204 WF32 1.2
C6217 2700P
C6216 0.1
PG SHIFTER
R6201 100KB
C6219 2.2/50V
C6220 2.2/50V
R6233 10K
C6218 22/6.3V
R6232 10K
TP6206 (3.0) 0
R6235 1500
C6221 2700P
R6234 2200
C6222 22/6.3V
C6223 1000P
R6238 1K
C6225 22/6.3V
C6226 10/16V
C6227 0.047
C6228 22/6.3V
TP6207 2.6 WF34
R6032 220K
R6033 15K
R6034 15K
R6037 22K
R6038 22K
R6039 22K
R6040 22K
R6041 22K
R6035 22K
R6044 22K
R6036 22K
R6042 22K
R6045 22K
R6046 22K
R6047 22K
R6048 22K
C6015 560P
C6003 0.1
L6001 4.7
C6017 0.1
C6230 0.1
C6229 4700P
R6052 22K
R6054 22K
R6056 22K
R6057 22K
R6051 22K
R6049 22K
R6053 1K
R6055 1K
L6002 4.7
SAFETY TAB SW
SW6001 VSHS0051
SW6002 ESE105SV1
CASSETTE UP/DOWN SW
TP6011
TP6009 5.2
R6062 47K
R6061 56K 1/4W
TP6003 (0) 3.3
R6043 22K
TP6001
R6058 68K
R6063 68K
R6077 8200
TP6015 5.2
TP6014 5.2
TP6012
R6066 820 1/4W
IC6004 VEKS4587 1.2
(TAKEUP REEL SENSOR)
5.2
Q6001 VEKS4588 (TAKEUP PHOTO TR)
5.2
Q6002 VEKS4588 (SUPPLY PHOTO TR)
P6201
(M)/FWD(L) 15
14
13
LIMIT 17
YS.CTL) 20
18
16
11
12
ITION A 8
ITION B 21
ITION C 22
ITION D 7
19
TOR (+) 9
TOR (-) 10
1
2
E HEAD 3
E HEAD 4
AD GND 6
AD 5
(53)04
(54)04
(42)02
(45)02
(43)02
(44)02
(18) 04
(24) 04
(26) 04
(20) 04
C
D
E
F
G
H
I
J
K

AM (E)

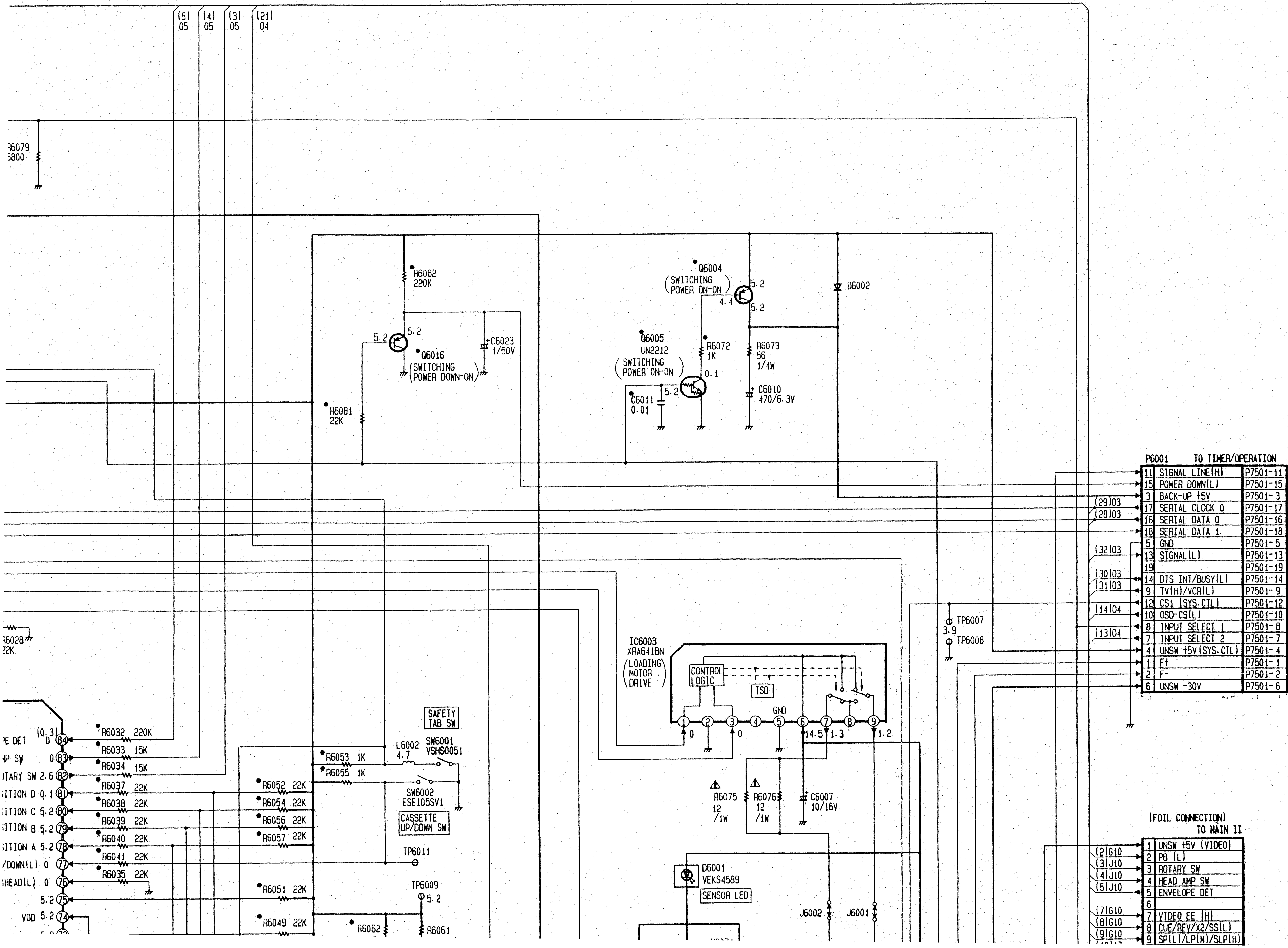
SAFETY NOTICE:
IDENTIFIED BY THE SIGN ⚠ HAVE
IARACTERISTICS IMPORTANT FOR SAFETY.
CING ANY OF THESE COMPONENTS,
HE SPECIFIED PARTS.

NOTE: THE MARK "•" INDICATES LEADLESS
(CHIP) COMPONENTS.

TEST POINT INFORMATION
⦶ : TEST POINT WITH A JUMPER WIRE ACROSS A HOLE IN THE P.C.B.
▭→ : TEST POINT WITH A COMPONENT LEAD ON THE FOIL SIDE.
⊘ : TEST POINT WITH NO TEST PIN.
● : TEST POINT WITH A TEST PIN.

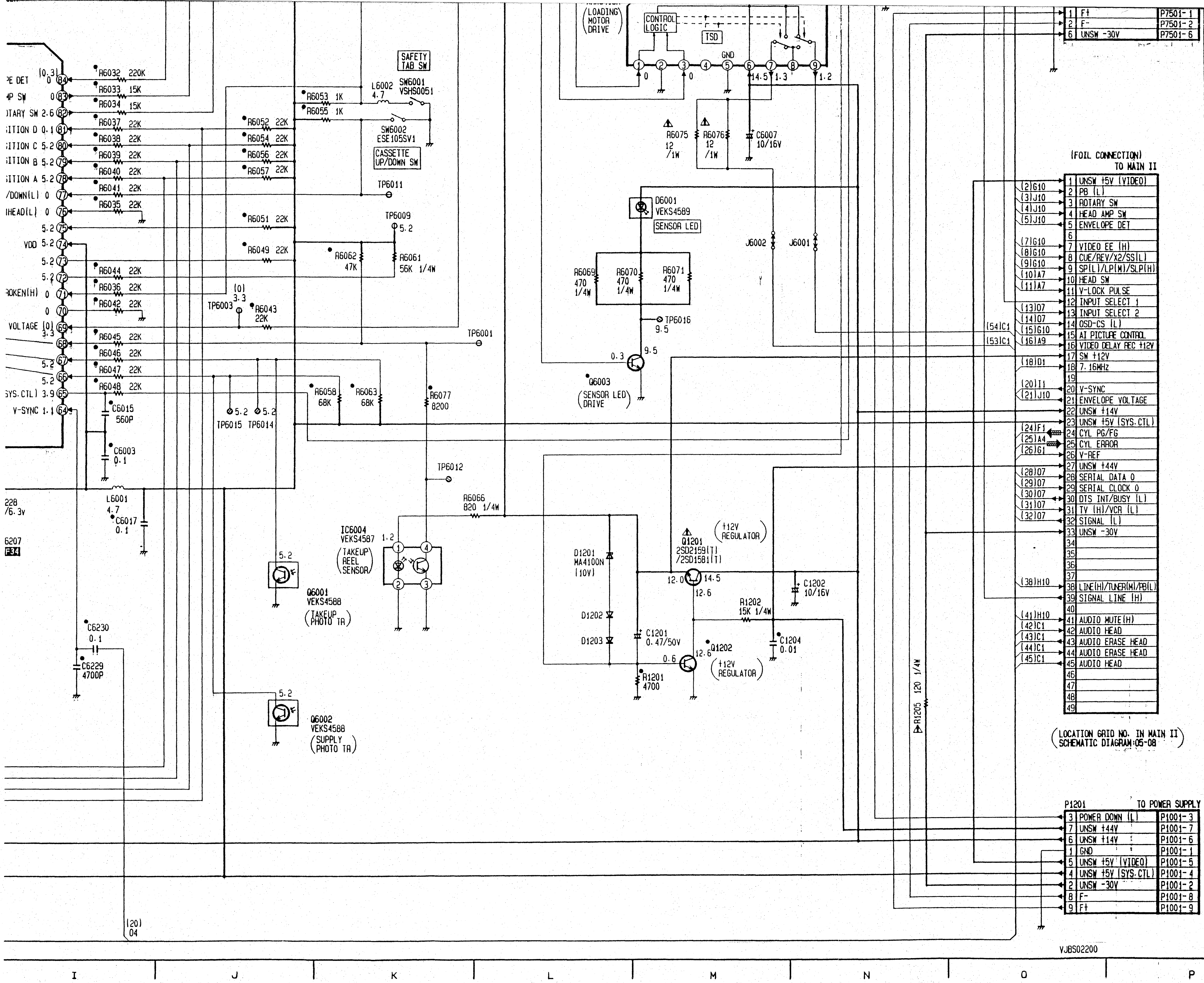
COMPARISON CHART
OF MODELS & MARKS

MODEL	MARK
PV-4308	A
PV-4311	B
PV-4311-K	C
PV-4315S	D
PV-4325S	E
PV-4351	F
PV-4351-K	G
PV-4358	H
PV-4355S	I


(5) 05
(4) 05
(3) 05
(21) 04
R6079
5800
R6082
220K
Q6016
(SWITCHING POWER DOWN-ON)
5.2
C6023
1/50V
R6081
22K
Q6004
(SWITCHING POWER ON-ON)
4.4
D6002
Q6005
UN2212
(SWITCHING POWER ON-ON)
R6072
1K
0.1
C6011
0.01
R6073
56
1/4W
C6010
470/6.3V
P6001 TO TIMER/OPERATION
11 SIGNAL LINE(H) P7501-11
15 POWER DOWN(L) P7501-15
3 BACK-UP +5V P7501-3
17 SERIAL CLOCK 0 P7501-17
16 SERIAL DATA 0 P7501-16
18 SERIAL DATA 1 P7501-18
5 GND P7501-5
13 SIGNAL(L) P7501-13
19 P7501-19
14 DTS INT/BUSY(L) P7501-14
9 TV(H)/VCR(L) P7501-9
12 CS1 (SYS.CTL) P7501-12
10 OSD-CS(L) P7501-10
8 INPUT SELECT 1 P7501-8
7 INPUT SELECT 2 P7501-7
4 UNSW +5V(SYS.CTL) P7501-4
1 F+ P7501-1
2 F- P7501-2
6 UNSW -30V P7501-6
(29)03
(28)03
(32)03
(30)03
(31)03
(14)04
(13)04
TP6007
3.9
TP6008
IC6003
XRA6418N
(LOADING MOTOR DRIVE)
CONTROL LOGIC
TSD
GND
14.5
1.3
1.2
R6075
12
/1W
R6076
12
/1W
C6007
10/16V
D6001
VEKS4589
SENSOR LED
J6002
J6001
R6028
22K
PE DET
MP SW
OTARY SW
ITION D
ITION C
ITION B
ITION A
/DOWN(L)
HEAD(L)
VDD
(0.3)
R6032 220K
R6033 15K
R6034 15K
R6037 22K
R6038 22K
R6039 22K
R6040 22K
R6041 22K
R6035 22K
R6052 22K
R6054 22K
R6056 22K
R6057 22K
R6051 22K
R6049 22K
R6053 1K
R6055 1K
R6062
R6061
L6002
4.7
SW6001
VSHS0051
SAFETY TAB SW
SW6002
ESE105SV1
CASSETTE UP/DOWN SW
TP6011
TP6009
5.2
(FOIL CONNECTION)
TO MAIN II
1 UNSW +5V (VIDEO)
2 PB (L)
3 ROTARY SW
4 HEAD AMP SW
5 ENVELOPE DET
6
7 VIDEO EE (H)
8 CUE/REV/X2/SS(L)
9 SP(L)/LP(M)/SLP(H)
(2)G10
(3)J10
(4)J10
(5)J10
(7)G10
(8)G10
(9)G10

POWER SUPPLY SECTION	
TRANSISTOR	
Q1201	M-3
Q1202	M-2
CONNECTOR	
P1201	O-1

SYSTEM CONTROL SECTION	
TRANSISTOR	
Q6001	J-3
Q6002	J-2
Q6003	L-4
Q6004	M-9
Q6005	L-8
Q6006	E-8
Q6007	B-9
Q6016	K-8
IC	
IC6001	G-5
IC6003	L-7
IC6004	K-3
CONNECTOR	
P6001	O-8
TEST POINT	
TP6001	L-4
TP6002	C-5
TP6003	J-4
TP6007	N-7
TP6008	N-7
TP6009	K-5
TP6010	F-10
TP6011	K-5
TP6012	K-4
TP6014	J-4
TP6015	J-4
TP6016	M-5


LOADING MOTOR DRIVE
CONTROL LOGIC
TSD
GND
14.5
1.3
1.2
P7501-1 F+
P7501-2 F-
P7501-6 UNSW -30V
PE DET (0.3) 0 84
MP SW 0 83
ROTARY SW 2.6 82
POSITION D 0.1 81
POSITION C 5.2 80
POSITION B 5.2 79
POSITION A 5.2 78
/DOWN(L) 0 77
HEAD(L) 0 76
5.2 75
VDD 5.2 74
5.2 73
5.2 72
BROKEN(H) 0 71
0 70
VOLTAGE (0) 3.3 69
68
5.2 67
5.2 66
SYS.CTL) 3.9 65
V-SYNC 1.1 64
R6032 220K
R6033 15K
R6034 15K
R6037 22K
R6038 22K
R6039 22K
R6040 22K
R6041 22K
R6035 22K
R6044 22K
R6036 22K
R6042 22K
R6045 22K
R6046 22K
R6047 22K
R6048 22K
C6015 560P
C6003 0.1
L6001 4.7
C6017 0.1
228 /6.3V
6207 F34
C6230 0.1
C6229 4700P
(20) 04
R6052 22K
R6054 22K
R6056 22K
R6057 22K
R6051 22K
R6049 22K
TP6003 (0) 3.3
R6043 22K
TP6015 5.2
TP6014 5.2
SAFETY TAB SW
R6053 1K
R6055 1K
L6002 4.7
SW6001 VSHS0051
SW6002 ESE105SV1
CASSETTE UP/DOWN SW
TP6011
TP6009 5.2
R6062 47K
R6061 56K 1/4W
TP6001
R6058 68K
R6063 68K
R6077 8200
TP6012
R6066 820 1/4W
IC6004 VEKS4587 (TAKEUP REEL SENSOR) 1.2
Q6001 VEKS4588 (TAKEUP PHOTO TR) 5.2
Q6002 VEKS4588 (SUPPLY PHOTO TR) 5.2
R6075 12 /1W
R6076 12 /1W
C6007 10/16V
D6001 VEKS4589
SENSOR LED
R6069 470 1/4W
R6070 470 1/4W
R6071 470 1/4W
TP6016 9.5
Q6003 (SENSOR LED DRIVE) 0.3 9.5
J6002
J6001
D1201 MA4100N (10V)
D1202
D1203
C1201 0.47/50V
R1201 4700
Q1201 2SD2159(T) /2SD1581(T) (+12V REGULATOR) 12.0 14.5 12.6
Q1202 (+12V REGULATOR) 0.6 12.6
R1202 15K 1/4W
C1202 10/16V
C1204 0.01
R1205 120 1/4W
(FOIL CONNECTION) TO MAIN II
(2)G10 2 PB (L)
1 UNSW +5V (VIDEO)
(3)J10 3 ROTARY SW
(4)J10 4 HEAD AMP SW
(5)J10 5 ENVELOPE DET
6
(7)G10 7 VIDEO EE (H)
(8)G10 8 CUE/REV/X2/SS(L)
(9)G10 9 SP(L)/LP(M)/SLP(H)
(10)A7 10 HEAD SW
(11)A7 11 V-LOCK PULSE
12 INPUT SELECT 1
(13)07 13 INPUT SELECT 2
(14)07 14 OSD-CS (L)
(54)C1 (15)G10 15 AI PICTURE CONTROL
(53)C1 (16)A9 16 VIDEO DELAY REC +12V
17 SW +12V
(18)D1 18 7.16MHz
19
(20)I1 20 V-SYNC
(21)J10 21 ENVELOPE VOLTAGE
22 UNSW +14V
23 UNSW +5V (SYS.CTL)
(24)F1 24 CYL PG/FG
(25)A4 25 CYL ERROR
(26)G1 26 V-REF
27 UNSW +44V
(28)07 28 SERIAL DATA 0
(29)07 29 SERIAL CLOCK 0
(30)07 30 DTS INT/BUSY (L)
(31)07 31 TV (H)/VCR (L)
(32)07 32 SIGNAL (L)
33 UNSW -30V
34
35
36
37
(38)H10 38 LINE(H)/TUNER(M)/PB(L)
39 SIGNAL LINE (H)
40
(41)H10 41 AUDIO MUTE(H)
(42)C1 42 AUDIO HEAD
(43)C1 43 AUDIO ERASE HEAD
(44)C1 44 AUDIO ERASE HEAD
(45)C1 45 AUDIO HEAD
46
47
48
49
(LOCATION GRID NO. IN MAIN II SCHEMATIC DIAGRAM:05-08)
P1201 TO POWER SUPPLY
3 POWER DOWN (L) P1001-3
7 UNSW +44V P1001-7
6 UNSW +14V P1001-6
1 GND P1001-1
5 UNSW +5V (VIDEO) P1001-5
4 UNSW +5V (SYS.CTL) P1001-4
2 UNSW -30V P1001-2
8 F- P1001-8
9 F+ P1001-9
VJBS02200
I
J
K
L
M
N
O
P

IC6001	G-5
IC6003	L-7
IC6004	K-3
CONNECTOR	
P6001	O-8
TEST POINT	
TP6001	L-4
TP6002	C-5
TP6003	J-4
TP6007	N-7
TP6008	N-7
TP6009	K-5
TP6010	F-10
TP6011	K-5
TP6012	K-4
TP6014	J-4
TP6015	J-4
TP6016	M-5

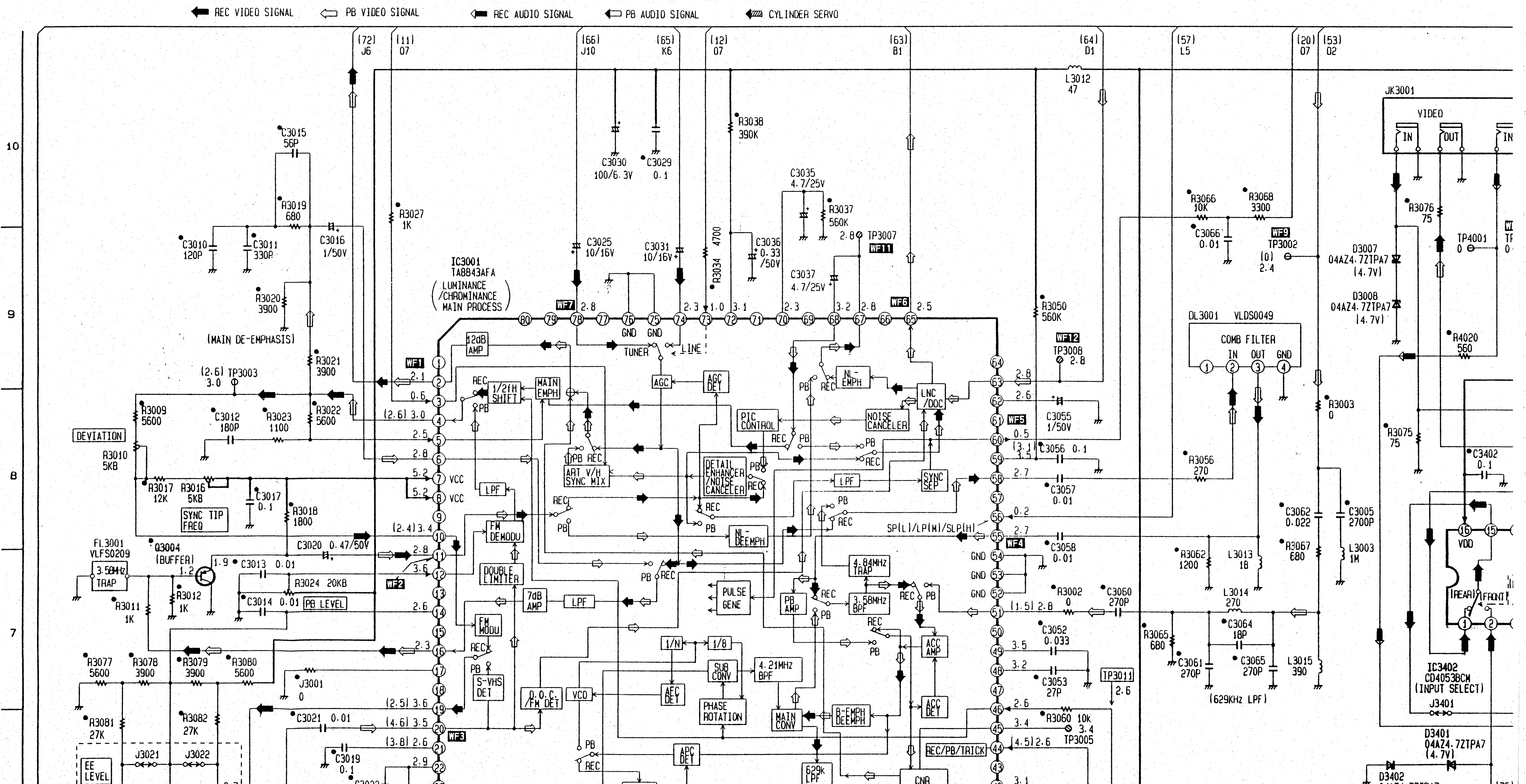
SERVO SECTION	
TRANSISTOR	
Q6201	B-7
IC	
IC6201	A-6
CONNECTOR	
P6201	C-2
TEST POINT	
TP6201	D-6
TP6202	D-5
TP6203	E-3
TP6204	E-3
TP6205	E-6
TP6206	G-3
TP6207	I-3
TP6208	B-6
TP6209	B-6
ADJUSTMENT	
R6201	E-3

MAIN II (CYLINDER DRIVE/SIGNAL PROCESS/AUDIO) SCHEMATIC DI

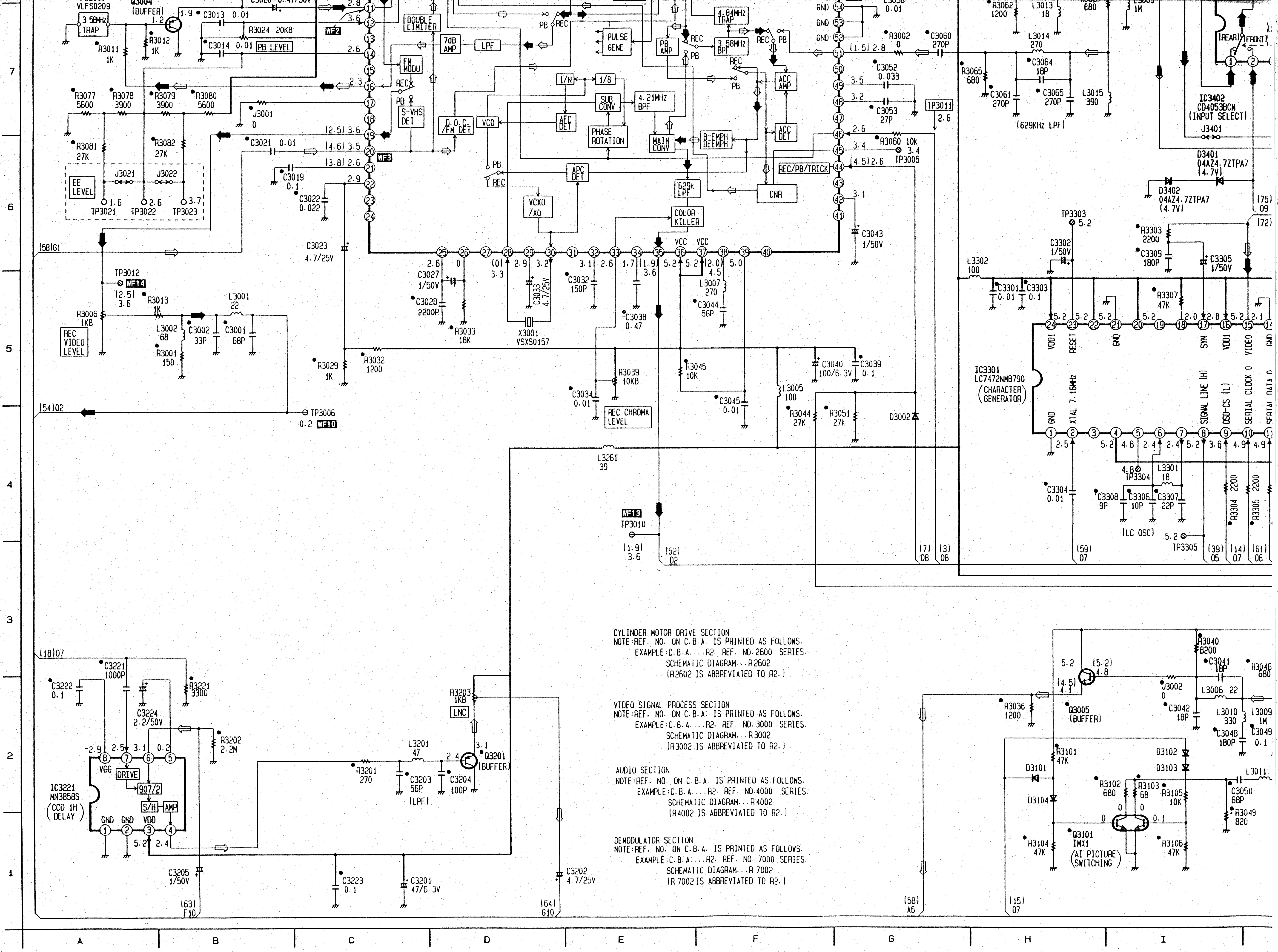
NOTE: HOW TO READ CONVERGED LINES
(100) B4
LOCATION GRID NUMBER OF THE OTHER END OF THE LINE
LINE NUMBER

NOTE:
1. DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.
2. TO MAINTAIN ORIGINAL FUNCTION AND RELIABILITY OF REPAIRED UNITS, USE ONLY ORIGINAL REPLACEMENT PARTS WHICH ARE LISTED WITH THEIR PART NUMBERS IN THE PARTS LIST SECTION OF THE SERVICE MANUAL.

IMPORTANT
COMPONENTS
SPECIAL CH
WHEN REPLA
USE ONLY T



REC VIDEO SIGNAL
PB VIDEO SIGNAL
REC AUDIO SIGNAL
PB AUDIO SIGNAL
CYLINDER SERVO
10
9
8
7
IC3001
TA8843AFA
LUMINANCE /CHROMINANCE MAIN PROCESS
(MAIN DE-EMPHASIS)
DEVIATION
R3010 5KB
SYNC TIP FREQ
FL3001 VLFS0209
3.58MHz TRAP
Q3004 (BUFFER)
PB LEVEL
EE LEVEL
J3021
J3022
J3001
TP3003
C3015 56P
R3019 680
C3010 120P
C3011 330P
C3016 1/50V
R3027 1K
R3020 3900
R3021 3900
R3022 5600
R3009 5600
C3012 180P
R3023 1100
R3017 12K
R3016 5KB
C3017 0.1
R3018 1800
C3020 0.47/50V
C3013 0.01
R3024 20KB
C3014 0.01
R3012 1K
R3011 1K
R3077 5600
R3078 3900
R3079 3900
R3080 5600
R3081 27K
R3082 27K
C3021 0.01
C3019 0.1
C3030 100/6.3V
C3029 0.1
C3025 10/16V
C3031 10/16V
R3038 390K
R3034 4700
C3036 0.33/50V
C3035 4.7/25V
R3037 560K
C3037 4.7/25V
TP3007
R3050 560K
TP3008
L3012 47
C3055 1/50V
C3056 0.1
C3057 0.01
C3058 0.01
R3002 0
C3060 270P
C3052 0.033
C3053 27P
R3060 10K
TP3005
TP3011
12dB AMP
1/2H SHIFT
MAIN EMPH
ART V/H SYNC MIX
DETAIL ENHANCER /NOISE CANCELER
NOISE CANCELER
PIC CONTROL
LNC /DOC
NL-EMPH
NL-DEEMPH
SYNC SEP
LPF
FM DEMODU
DOUBLE LIMITER
7dB AMP
FM MODU
S-VHS DET
D.O.C. /FM DET
VCO
AGC
AGC DET
TUNER
LINE
PULSE GENE
PB AMP
4.84MHz TRAP
3.58MHz BPF
ACC AMP
ACC DET
1/N
1/8
AFC DET
SUB CONV
4.21MHz BPF
PHASE ROTATION
MAIN CONV
B-EMPH DEEMPH
APC DET
629k LPF
REC/PB/TRICK
CNR
SP(L)/LP(M)/SLP(H)
VCC
GND
REC
PB
R3066 10K
R3068 3300
C3066 0.01
TP3002
R3056 270
DL3001 VLDS0049
COMB FILTER
IN OUT GND
R3062 1200
L3013 18
L3014 270
C3064 18P
R3065 680
C3061 270P
C3065 270P
L3015 390
(629KHz LPF)
C3062 0.022
C3005 2700P
R3067 680
L3003 1M
R3003 0
JK3001
VIDEO
IN
OUT
R3076 75
R3075 75
D3007 04AZ4.7ZTPA7 (4.7V)
D3008 04AZ4.7ZTPA7 (4.7V)
TP4001
R4020 560
C3402 0.1
VDD
REAR
FRONT
IC3402 CD4053BCM (INPUT SELECT)
J3401
D3401 04AZ4.7ZTPA7 (4.7V)
D3402


VLFS0209
3.58MHz TRAP
Q3004 (BUFFER)
R3011 1K
R3012 1K
C3013 0.01
R3024 20KB
C3014 0.01
PB LEVEL
WF2
R3077 5600
R3078 3900
R3079 3900
R3080 5600
J3001 0
R3081 27K
R3082 27K
EE LEVEL
J3021
J3022
TP3021
TP3022
TP3023
C3021 0.01
C3019 0.1
C3022 0.022
WF3
DOUBLE LIMITER
7dB AMP
LPF
FM MODU
S-VHS DET
D.O.C. /FM DET
VCO
1/N
1/8
SUB CONV
4.21MHz BPF
AFC DET
PHASE ROTATION
MAIN CONV
B-EMPH DEEMPH
ACC DET
ACC AMP
APC DET
VCXO /XO
629k LPF
COLOR KILLER
CNR
REC/PB/TRICK
PULSE GENE
PB AMP
4.43MHz TRAP
3.58MHz BPF
REC
PB
GND
R3002 0
C3060 270P
C3052 0.033
C3053 27P
TP3011
R3060 10k
TP3005
C3043 1/50V
C3023 4.7/25V
C3027 1/50V
C3028 2200P
R3033 18K
C3033 4.7/25V
X3001 VSXS0157
C3032 150P
C3038 0.47
L3007 270
C3044 56P
VCC
(58)G1
TP3012
WF14
R3006 1KB
REC VIDEO LEVEL
R3013 1K
L3001 22
L3002 68
C3002 33P
C3001 68P
R3001 150
R3029 1K
R3032 1200
R3039 10KB
C3034 0.01
REC CHROMA LEVEL
R3045 10K
C3045 0.01
C3040 100/6.3V
C3039 0.1
L3005 100
R3044 27K
R3051 27k
D3002
(54)02
TP3006
WF10
L3261 39
WF13
TP3010
(52) 02
(7) 08
(3) 08
R3062 1200
L3013 18
R3065 680
L3014 270
C3064 18P
C3061 270P
C3065 270P
L3015 390
(629KHz LPF)
IC3402 CD4053BCM (INPUT SELECT)
(REAR)
(FRONT)
J3401
D3401 04AZ4.7ZTPA7 (4.7V)
D3402 04AZ4.7ZTPA7 (4.7V)
TP3303
C3302 1/50V
R3303 2200
C3309 180P
C3305 1/50V
L3302 100
C3301 0.01
C3303 0.1
R3307 47K
VDD1
RESET
GND
SYN
VIDEO
IC3301 LC7472NMB790 (CHARACTER GENERATOR)
XTAL 7.16MHz
SIGNAL LINE (H)
OSD-CS (L)
SERIAL CLOCK 0
SERIAL DATA 0
TP3304
L3301 18
C3304 0.01
C3308 9P
C3306 10P
C3307 22P
(LC OSC)
TP3305
R3304 2200
R3305 2200
(59) 07
(39) 05
(14) 07
(61) 06
(18)07
C3221 1000P
C3222 0.1
R3221 3300
C3224 2.2/50V
R3202 2.2M
VGG
DRIVE
907/2
S/H
AMP
VDD
IC3221 MN3858S (CCD 1H DELAY)
C3205 1/50V
(63) F10
R3201 270
L3201 47
C3203 56P
C3204 100P
(LPF)
R3203 1KB
LNC
Q3201 (BUFFER)
C3223 0.1
C3201 47/6.3V
C3202 4.7/25V
(64) G10
(58) A6
R3036 1200
Q3005 (BUFFER)
R3040 8200
C3041 18P
R3046 680
J3002 0
L3006 22
C3042 18P
L3010 330
L3009 1M
C3048 180P
C3049 0.1
R3101 47K
D3101
D3102
D3103
D3104
R3102 680
R3103 68
R3105 10K
L3011
C3050 68P
R3049 820
R3104 47K
Q3101 IMX1 (AI PICTURE SWITCHING)
R3106 47K
(15) 07
1
2
3
4
5
6
7
A
B
C
D
E
F
G
H
I

CYLINDER MOTOR DRIVE SECTION
NOTE:REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE:C.B.A....R2. REF. NO.2600 SERIES.
SCHEMATIC DIAGRAM...R2602
(R2602 IS ABBREVIATED TO R2.)

VIDEO SIGNAL PROCESS SECTION
NOTE:REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE:C.B.A....R2. REF. NO.3000 SERIES.
SCHEMATIC DIAGRAM...R3002
(R3002 IS ABBREVIATED TO R2.)

AUDIO SECTION
NOTE:REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE:C.B.A....R2. REF. NO.4000 SERIES.
SCHEMATIC DIAGRAM...R4002
(R4002 IS ABBREVIATED TO R2.)

DEMODULATOR SECTION
NOTE:REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE:C.B.A....R2. REF. NO. 7000 SERIES.
SCHEMATIC DIAGRAM...R 7002
(R 7002 IS ABBREVIATED TO R2.)

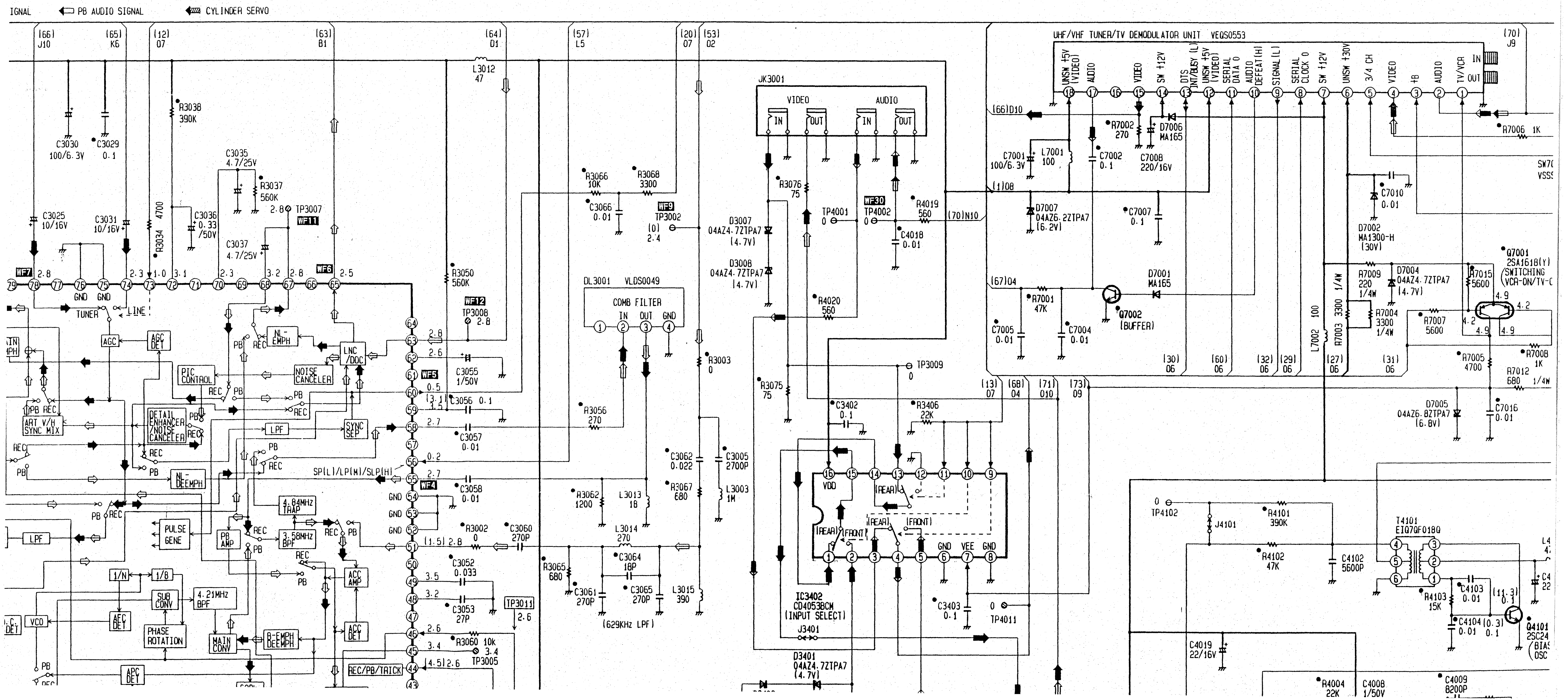
[VE/SIGNAL PROCESS/AUDIO) SCHEMATIC DIAGRAM (E)

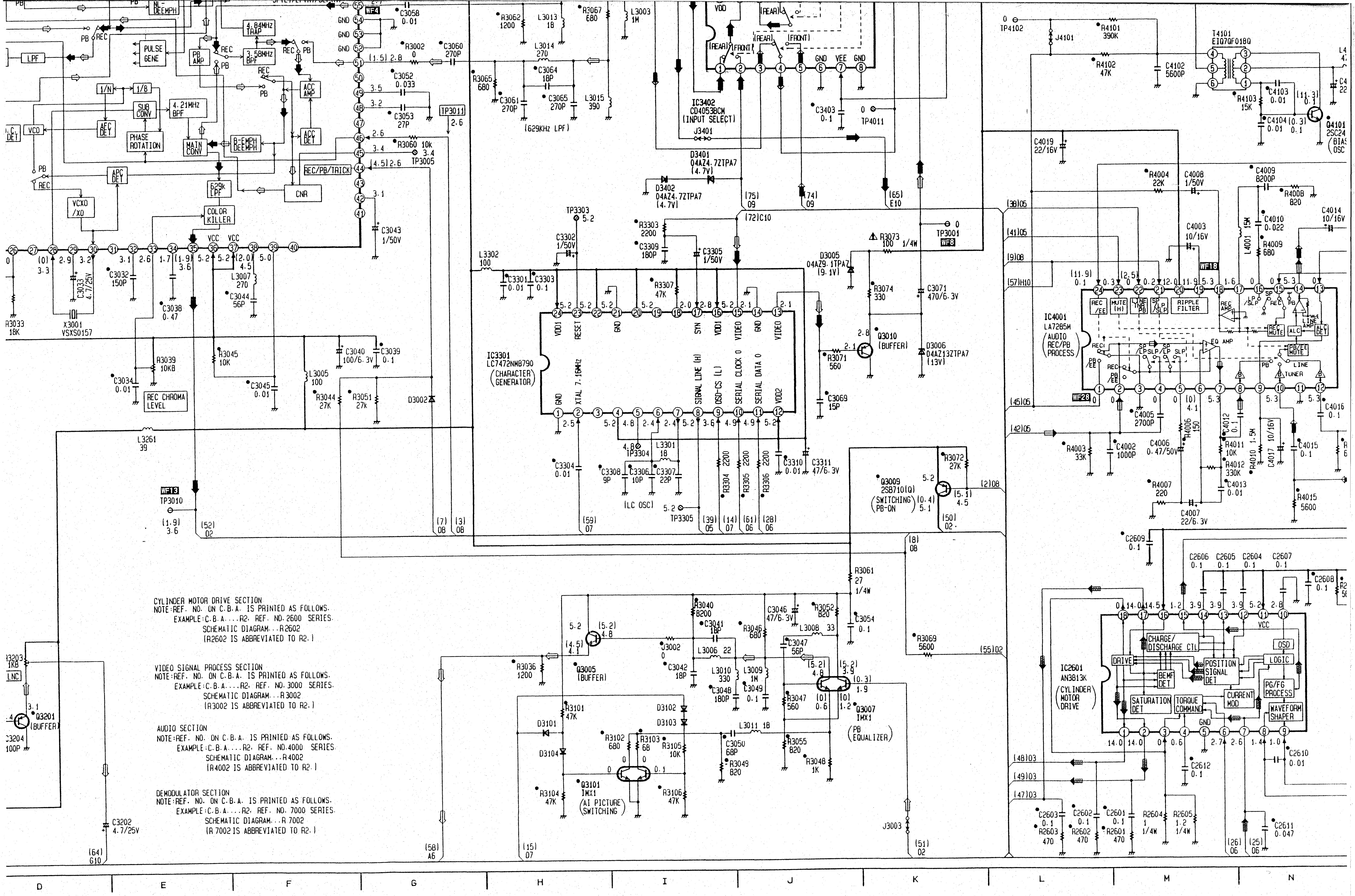
NOTE:
1. DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.
2. TO MAINTAIN ORIGINAL FUNCTION AND RELIABILITY OF REPAIRED UNITS, USE ONLY ORIGINAL REPLACEMENT PARTS WHICH ARE LISTED WITH THEIR PART NUMBERS IN THE PARTS LIST SECTION OF THE SERVICE MANUAL.

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS,
USE ONLY THE SPECIFIED PARTS.

NOTE: THE MARK "•" INDICATES LEADLESS (CHIP) COMPONENTS.

TE


IGNAL
PB AUDIO SIGNAL
CYLINDER SERVO
(66) J10
(65) K6
(12) 07
(63) B1
(64) D1
(57) L5
(20) 07
(53) 02
(70) J9
UHF/VHF TUNER/TV DEMODULATOR UNIT VEQS0553
UNSW +5V (VIDEO)
AUDIO
VIDEO
SW +12V
DTS INT/BUSY (L)
UNSW +5V (VIDEO)
SERIAL DATA 0
AUDIO DEFEAT(H)
SIGNAL(L)
SERIAL CLOCK 0
SW +12V
UNSW +30V
3/4 CH
VIDEO
+B
AUDIO
TV/VCR
IN
OUT
R7006 1K
L3012 47
R3038 390K
C3030 100/6.3V
C3029 0.1
C3035 4.7/25V
R3037 560K
C3036 0.33/50V
C3037 4.7/25V
R3034 4700
C3025 10/16V
C3031 10/16V
TP3007
WF11
WF7
WF6
TUNER
GND
LINE
AGC
AGC DET
NL-EMPH
LNC /DOC
NOISE CANCELER
PIC CONTROL
DETAIL ENHANCER /NOISE CANCELER
ART V/H SYNC MIX
LPF
SYNC SEP
NL-DEEMPH
4.84MHz TRAP
3.58MHz BPF
PULSE GENE
PB AMP
1/N
1/8
SUB CONV
4.21MHz BPF
AFC DET
VCO
PHASE ROTATION
MAIN CONV
B-EMPH DEEMPH
ACC AMP
ACC DET
APC DET
REC/PB/TRICK
SP(L)/LP(M)/SLP(H)
R3066 10K
R3068 3300
C3066 0.01
WF9
TP3002
R3050 560K
WF12
TP3008
C3055 1/50V
WF5
C3056 0.1
C3057 0.01
C3058 0.01
WF4
R3002 0
C3060 270P
C3052 0.033
C3053 27P
TP3011
R3060 10k
TP3005
R3056 270
DL3001 VLDS0049
COMB FILTER
IN OUT GND
R3062 1200
L3013 18
L3014 270
C3064 18P
C3061 270P
C3065 270P
L3015 390
R3065 680
(629KHz LPF)
C3062 0.022
C3005 2700P
R3067 680
L3003 1M
R3003 0
JK3001
VIDEO
AUDIO
IN
OUT
R3076 75
D3007 04AZ4.7ZTPA7 (4.7V)
D3008 04AZ4.7ZTPA7 (4.7V)
TP4001
WF30
TP4002
R4019 560
C4018 0.01
R4020 560
R3075 75
TP3009
C3402 0.1
R3406 22K
VDD
REAR
FRONT
GND VEE GND
IC3402 CD4053BCM (INPUT SELECT)
J3401
D3401 04AZ4.7ZTPA7 (4.7V)
C3403 0.1
TP4011
(13) 07
(68) 04
(71) 010
(73) 09
(66) D10
(1) 08
(70) N10
(67) 04
R7002 270
D7006 MA165
C7001 100/6.3V
L7001 100
C7002 0.1
C7008 220/16V
D7007 04AZ6.2ZTPA7 (6.2V)
C7007 0.1
C7010 0.01
D7002 MA1300-H (30V)
R7001 47K
C7005 0.01
C7004 0.01
Q7002 (BUFFER)
D7001 MA165
R7009 220 1/4W
D7004 04AZ4.7ZTPA7 (4.7V)
R7004 3300 1/4W
R7003 3300 1/4W
L7002 100
R7015 5600
R7007 5600
Q7001 2SA1618(Y) (SWITCHING VCR-ON/TV-O
R7005 4700
R7008 1K
R7012 680 1/4W
D7005 04AZ6.8ZTPA7 (6.8V)
C7016 0.01
(30) 06
(60) 06
(32) 06
(29) 06
(27) 06
(31) 06
SW7
VSS
TP4102
J4101
R4101 390K
R4102 47K
C4102 5600P
T4101 EI07QF018Q
R4103 15K
C4103 0.01
C4104 0.01
Q4101 2SC24 (BIAS OSC
C4019 22/16V
R4004 22K
C4008 1/50V
C4009 8200P


IC3301
LC7472NMB790
(CHARACTER GENERATOR)
VDD1
RESET
GND
SYN
VIDEO
VDD2
XTAL 7.16MHz
SIGNAL LINE (H)
OSD-CS (L)
SERIAL CLOCK 0
SERIAL DATA 0
(LC OSC)
IC3402
CD4053BCM
(INPUT SELECT)
(REAR)
(FRONT)
VDD
VEE
GND
D3401
04AZ4.7ZTPA7
(4.7V)
D3402
04AZ4.7ZTPA7
(4.7V)
D3005
04AZ9.1TPA7
(9.1V)
D3006
04AZ13ZTPA7
(13V)
Q3010
(BUFFER)
Q3009
2SB710(Q)
(SWITCHING PB-ON)
Q3005
(BUFFER)
Q3101
IMX1
(AI PICTURE SWITCHING)
Q3007
IMX1
(PB EQUALIZER)
Q3201
(BUFFER)
(629KHz LPF)
4.84MHz TRAP
3.58MHz BPF
4.21MHz BPF
PULSE GENE
PB AMP
ACC AMP
ACC DET
AFC DET
APC DET
SUB CONV
PHASE ROTATION
MAIN CONV
B-EMPH DEEMPH
NL-DEEMPH
CNR
629k LPF
COLOR KILLER
REC/PB/TRICK
VCXO /XO
VCO
LPF
1/N
1/8
REC CHROMA LEVEL
X3001
VSXS0157
IC4001
LA7285M
(AUDIO REC/PB PROCESS)
REC /EE
MUTE (H)
LINE TNR PB
SP /SLP
RIPPLE FILTER
REC AMP
REC MUTE
ALC
ALC DET
EQ AMP
PB/EE MUTE
LINE
TUNER
T4101
EI07QF018Q
Q4101
2SC24
(BIAS OSC)
IC2601
AN3813K
(CYLINDER MOTOR DRIVE)
CHARGE/ DISCHARGE CTL
DRIVE
BEMF DET
POSITION SIGNAL DET
LOGIC
OSD
PG/FG PROCESS
SATURATION DET
TORQUE COMMAND
CURRENT MOD
WAVEFORM SHAPER
GND
VCC
TP3001
TP3005
TP3010
TP3011
TP3303
TP3304
TP3305
TP4011
TP4102
J3401
J3003
J4101
WF4
WF8
WF13
WF18
WF28
D
E
F
G
H
I
J
K
L
M
N

CYLINDER MOTOR DRIVE SECTION
NOTE:REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE:C.B.A....R2, REF. NO.2600 SERIES.
SCHEMATIC DIAGRAM...R2602
(R2602 IS ABBREVIATED TO R2.)

VIDEO SIGNAL PROCESS SECTION
NOTE:REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE:C.B.A....R2, REF. NO.3000 SERIES.
SCHEMATIC DIAGRAM...R3002
(R3002 IS ABBREVIATED TO R2.)

AUDIO SECTION
NOTE:REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE:C.B.A....R2, REF. NO.4000 SERIES.
SCHEMATIC DIAGRAM...R4002
(R4002 IS ABBREVIATED TO R2.)

DEMODULATOR SECTION
NOTE:REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE:C.B.A....R2, REF. NO. 7000 SERIES.
SCHEMATIC DIAGRAM...R 7002
(R 7002 IS ABBREVIATED TO R2.)

AGRAM (E)

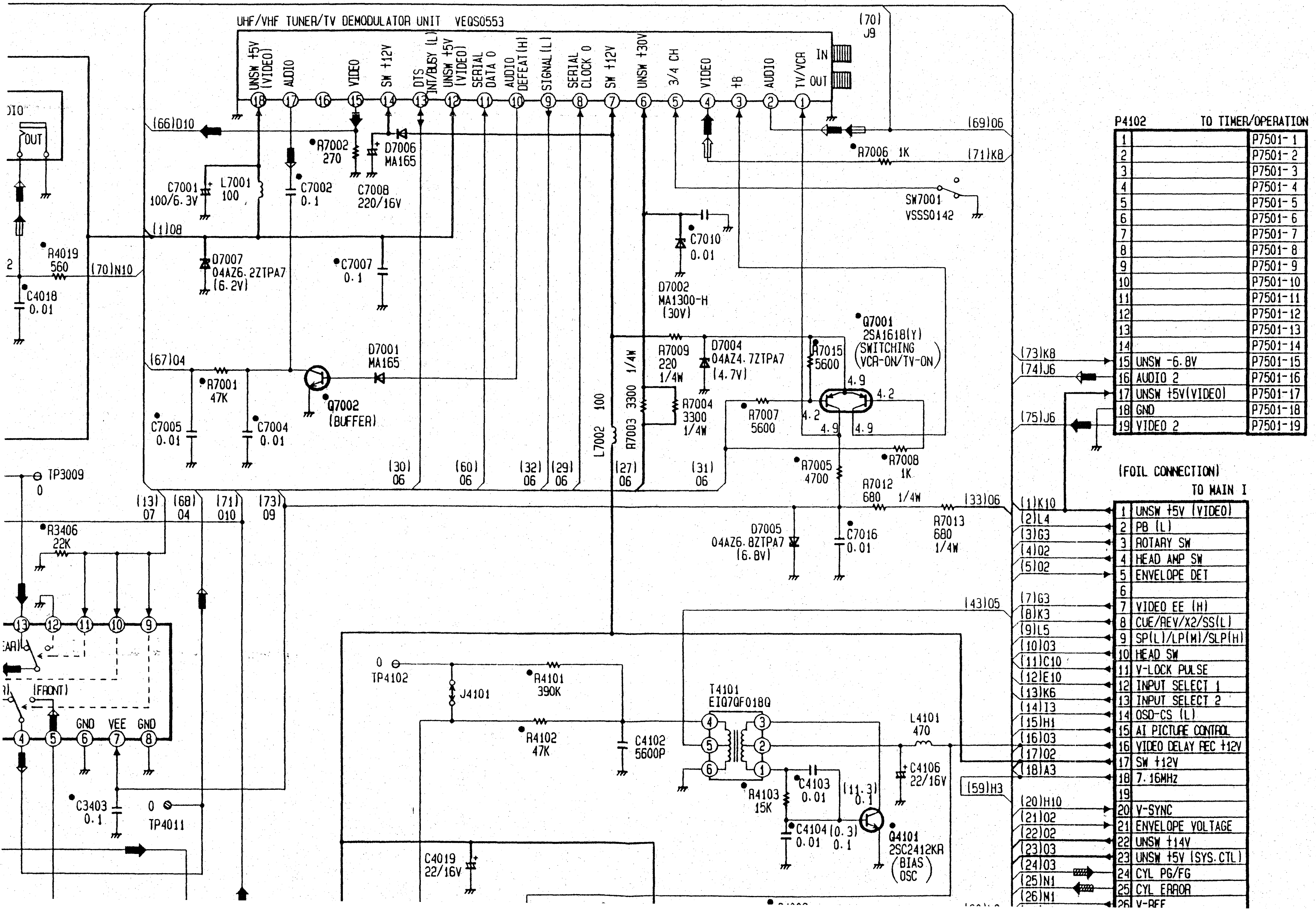
ETY NOTICE:
ENTIFIED BY THE SIGN ⚠ HAVE
CTERISTICS IMPORTANT FOR SAFETY.
G ANY OF THESE COMPONENTS,
SPECIFIED PARTS.

NOTE: THE MARK "•" INDICATES LEADLESS
(CHIP) COMPONENTS.

TEST POINT INFORMATION
- ⦶ : TEST POINT WITH A JUMPER WIRE ACROSS A HOLE IN THE P.C.B.
- ▭→ : TEST POINT WITH A COMPONENT LEAD ON THE FOIL SIDE.
- ⊘ : TEST POINT WITH NO TEST PIN.
- ● : TEST POINT WITH A TEST PIN.

COMPARISON CHART
OF MODELS & MARKS

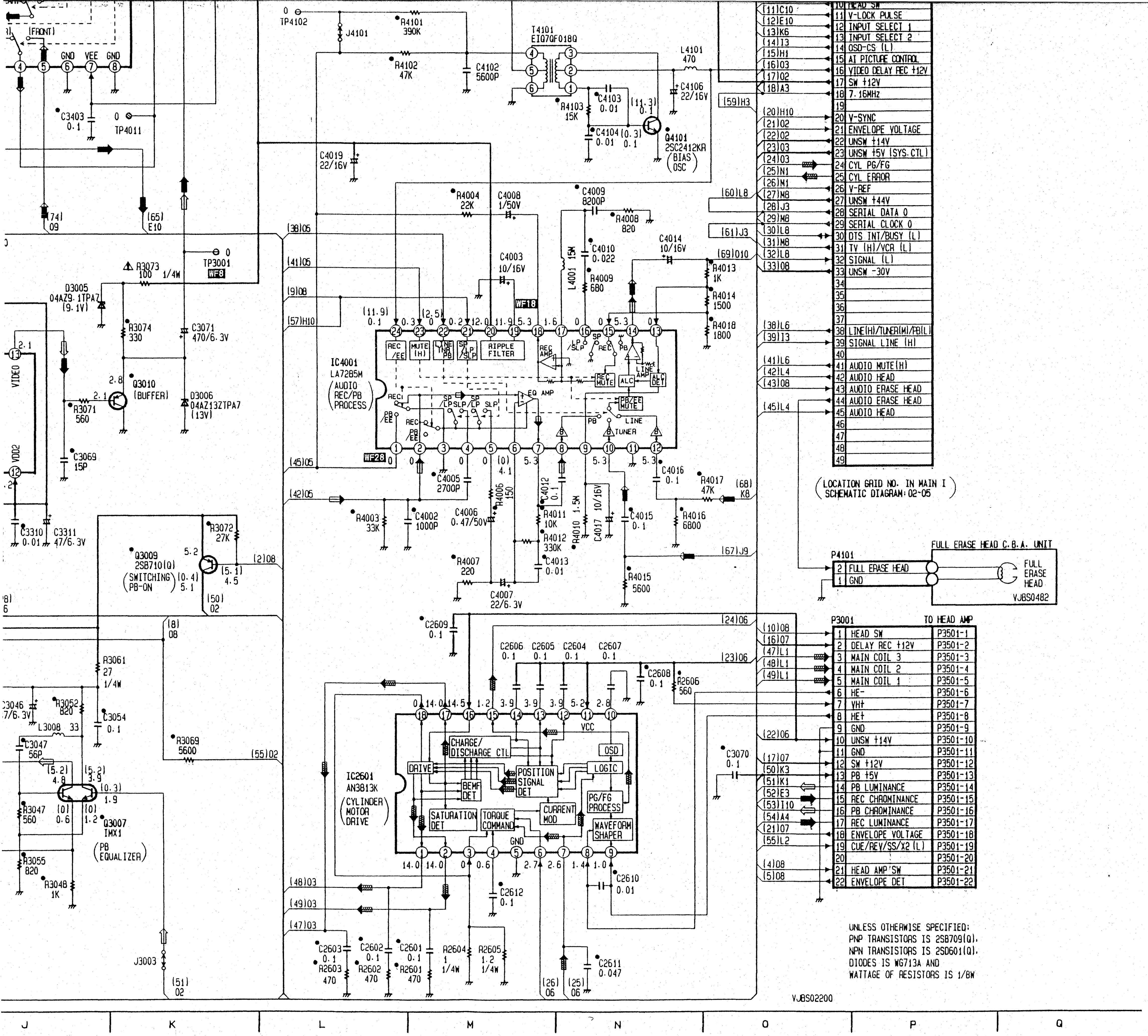
MODEL	MARK
PV-4308	A
PV-4311	B
PV-4311-K	C
PV-4315S	D
PV-4325S	E
PV-4351	F
PV-4351-K	G
PV-4358	H
PV-4355S	I



UHF/VHF TUNER/TV DEMODULATOR UNIT VEQS0553
(70) J9
IN
OUT
UNSW +5V (VIDEO)
AUDIO
VIDEO
SW +12V
DTS INT/BUSY (L)
UNSW +5V (VIDEO)
SERIAL DATA O
AUDIO DEFEAT(H)
SIGNAL(L)
SERIAL CLOCK O
SW +12V
UNSW +30V
3/4 CH
VIDEO
+B
AUDIO
TV/VCR
(66) D10
(69) 06
(71) K8
R7002 270
D7006 MA165
R7006 1K
C7001 100/6.3V
L7001 100
C7002 0.1
C7008 220/16V
SW7001 VSSS0142
(1) 08
C7010 0.01
D7007 04AZ6.2ZTPA7 (6.2V)
C7007 0.1
D7002 MA1300-H (30V)
R4019 560
(70) N10
C4018 0.01
Q7001 2SA1618(Y) (SWITCHING (VCR-ON/TV-ON)
(67) 04
R7001 47K
D7001 MA165
Q7002 (BUFFER)
R7009 220 1/4W
D7004 04AZ4.7ZTPA7 (4.7V)
R7015 5600
R7004 3300 1/4W
R7007 5600
L7002 100
R7003 3300 1/4W
C7005 0.01
C7004 0.01
R7005 4700
R7008 1K
R7012 680 1/4W
(30) 06
(60) 06
(32) 06
(29) 06
(27) 06
(31) 06
(33) 06
TP3009 0
(13) 07
(68) 04
(71) 010
(73) 09
R3406 22K
D7005 04AZ6.8ZTPA7 (6.8V)
C7016 0.01
R7013 680 1/4W
(43) 05
(FRONT)
GND VEE GND
C3403 0.1
TP4011
TP4102 0
J4101
R4101 390K
R4102 47K
C4102 5600P
T4101 EI07QF018Q
L4101 470
C4106 22/16V
C4103 0.01
R4103 15K
C4104 0.01
Q4101 2SC2412KR (BIAS OSC)
(59) H3
C4019 22/16V
P4102 TO TIMER/OPERATION
1 P7501-1
2 P7501-2
3 P7501-3
4 P7501-4
5 P7501-5
6 P7501-6
7 P7501-7
8 P7501-8
9 P7501-9
10 P7501-10
11 P7501-11
12 P7501-12
13 P7501-13
14 P7501-14
15 UNSW -6.8V P7501-15
16 AUDIO 2 P7501-16
17 UNSW +5V(VIDEO) P7501-17
18 GND P7501-18
19 VIDEO 2 P7501-19
(73) K8
(74) J6
(75) J6
(FOIL CONNECTION)
TO MAIN I
1 UNSW +5V (VIDEO)
2 PB (L)
3 ROTARY SW
4 HEAD AMP SW
5 ENVELOPE DET
6
7 VIDEO EE (H)
8 CUE/REV/X2/SS(L)
9 SP(L)/LP(M)/SLP(H)
10 HEAD SW
11 V-LOCK PULSE
12 INPUT SELECT 1
13 INPUT SELECT 2
14 OSD-CS (L)
15 AI PICTURE CONTROL
16 VIDEO DELAY REC +12V
17 SW +12V
18 7.16MHz
19
20 V-SYNC
21 ENVELOPE VOLTAGE
22 UNSW +14V
23 UNSW +5V (SYS.CTL)
24 CYL PG/FG
25 CYL ERROR
26 V-REF
(1) K10
(2) L4
(3) G3
(4) 02
(5) 02
(7) G3
(8) K3
(9) L5
(10) 03
(11) C10
(12) E10
(13) K6
(14) 13
(15) H1
(16) 03
(17) 02
(18) A3
(20) H10
(21) 02
(22) 02
(23) 03
(24) 03
(25) N1
(26) N1

CYLINDER DRIVE SECTION	
IC	
IC2601	L-2

VIDEO SIGNAL PROCESS SECTION	
TRANSISTOR	
Q3004	A-8
Q3005	H-2
Q3007	K-2
Q3009	K-4
Q3010	K-5
Q3101	H-1
Q3201	D-2
IC	
IC3001	C-9
IC3221	A-2
IC3301	H-5
IC3402	I-7
CONNECTOR	
P3001	O-3
TEST POINT	
TP3001	K-6
TP3002	H-9
TP3003	B-9
TP3005	G-6
TP3006	C-4
TP3007	F-9
TP3008	G-9
TP3009	J-8
TP3010	E-4
TP3011	G-7


TP4102
J4101
R4101 390K
R4102 47K
C4102 5600P
T4101 EI070F018Q
L4101 470
C4106 22/16V
R4103 15K
C4103 0.01
C4104 0.01
Q4101 2SC2412KR (BIAS OSC)
C4019 22/16V
R4004 22K
C4008 1/50V
C4009 8200P
R4008 820
C4003 10/16V
L4001 15K
C4010 0.022
R4009 680
C4014 10/16V
R4013 1K
R4014 1500
R4018 1800
IC4001 LA7285M (AUDIO REC/PB PROCESS)
REC /EE
MUTE (H)
LINE TNR PB
SP LP SLP
RIPPLE FILTER
REC AMP
REC MUTE
ALC
ALC DET
LINE AMP
EQ AMP
PB/EE MUTE
TUNER
C4005 2700P
R4006 150
C4012 0.1
R4011 10K
R4012 330K
R4010 1.5M
C4017 10/16V
C4015 0.1
C4016 0.1
R4017 47K
R4016 6800
R4003 33K
C4002 1000P
C4006 0.47/50V
R4007 220
C4007 22/6.3V
C4013 0.01
R4015 5600
WF8
WF18
WF28
TP3001
R3073 100 1/4W
D3005 04AZ9.1TPA7 (9.1V)
R3074 330
C3071 470/6.3V
Q3010 (BUFFER)
R3071 560
D3006 04AZ13ZTPA7 (13V)
C3069 15P
C3403 0.1
TP4011
C3310 0.01
C3311 47/6.3V
Q3009 2SB710(Q) (SWITCHING PB-ON)
R3072 27K
R3061 27 1/4W
R3052 820
C3054 0.1
L3008 33
C3047 56P
R3069 5600
R3047 560
Q3007 IMX1 (PB EQUALIZER)
R3055 820
R3048 1K
J3003
VIDEO
VDD2
GND VEE GND
(FRONT)
IC2601 AN3813K (CYLINDER MOTOR DRIVE)
CHARGE/DISCHARGE CTL
DRIVE
BEMF DET
POSITION SIGNAL DET
LOGIC
OSD
VCC
PG/FG PROCESS
SATURATION DET
TORQUE COMMAND
CURRENT MOD
WAVEFORM SHAPER
GND
C2609 0.1
C2606 0.1
C2605 0.1
C2604 0.1
C2607 0.1
C2608 0.1
R2606 560
C2612 0.1
C2610 0.01
C2603 0.1
R2603 470
C2602 0.1
R2602 470
C2601 0.1
R2601 470
R2604 1 1/4W
R2605 1.2 1/4W
C2611 0.047
C3070 0.1
P3001
10 HEAD SW
11 V-LOCK PULSE
12 INPUT SELECT 1
13 INPUT SELECT 2
14 OSD-CS (L)
15 AI PICTURE CONTROL
16 VIDEO DELAY REC +12V
17 SW +12V
18 7.16MHz
19
20 V-SYNC
21 ENVELOPE VOLTAGE
22 UNSW +14V
23 UNSW +5V (SYS.CTL)
24 CYL PG/FG
25 CYL ERROR
26 V-REF
27 UNSW +44V
28 SERIAL DATA 0
29 SERIAL CLOCK 0
30 DTS INT/BUSY (L)
31 TV (H)/VCR (L)
32 SIGNAL (L)
33 UNSW -30V
38 LINE(H)/TUNER(M)/PB(L)
39 SIGNAL LINE (H)
41 AUDIO MUTE(H)
42 AUDIO HEAD
43 AUDIO ERASE HEAD
44 AUDIO ERASE HEAD
45 AUDIO HEAD
(LOCATION GRID NO. IN MAIN I SCHEMATIC DIAGRAM: 02-05)
FULL ERASE HEAD C.B.A. UNIT
P4101
2 FULL ERASE HEAD
1 GND
FULL ERASE HEAD
VJBS0482
P3001 TO HEAD AMP
1 HEAD SW P3501-1
2 DELAY REC +12V P3501-2
3 MAIN COIL 3 P3501-3
4 MAIN COIL 2 P3501-4
5 MAIN COIL 1 P3501-5
6 HE- P3501-6
7 VH+ P3501-7
8 HE+ P3501-8
9 GND P3501-9
10 UNSW +14V P3501-10
11 GND P3501-11
12 SW +12V P3501-12
13 PB +5V P3501-13
14 PB LUMINANCE P3501-14
15 REC CHROMINANCE P3501-15
16 PB CHROMINANCE P3501-16
17 REC LUMINANCE P3501-17
18 ENVELOPE VOLTAGE P3501-18
19 CUE/REV/SS/X2 (L) P3501-19
20 P3501-20
21 HEAD AMP SW P3501-21
22 ENVELOPE DET P3501-22
VJBS02200
J K L M N O P Q

UNLESS OTHERWISE SPECIFIED:
PNP TRANSISTORS IS 2SB709(Q),
NPN TRANSISTORS IS 2SD601(Q),
DIODES IS MG713A AND
WATTAGE OF RESISTORS IS 1/8W

P3001	0-3
TEST POINT	
TP3001	K-6
TP3002	H-9
TP3003	B-9
TP3005	G-6
TP3006	C-4
TP3007	F-9
TP3008	G-9
TP3009	J-8
TP3010	E-4
TP3011	G-7
TP3012	B-5
TP3021	A-6
TP3022	A-6
TP3023	B-6
TP3303	H-6
TP3304	I-4
TP3305	I-4
ADJUSTMENT	
R3006	A-5
R3010	A-8
R3024	B-7
R3039	E-5
R3203	D-2

AUDIO SECTION

TRANSISTOR	
Q4101	N-7
IC	
IC4001	L-5
CONNECTOR	
P4101	0-4
P4102	0-3
TEST POINT	
TP4001	I-9
TP4002	J-9
TP4011	J-9
TP4102	L-7

DEMODULATOR SECTION

TRANSISTOR	
Q7001	N-9
Q7002	K-9

MAIN I (POWER SUPPLY/SYSTEM CONTROL/SERVO) SCHEMATIC DIA

NOTE: HOW TO READ CONVERGED LINES

(100)B4

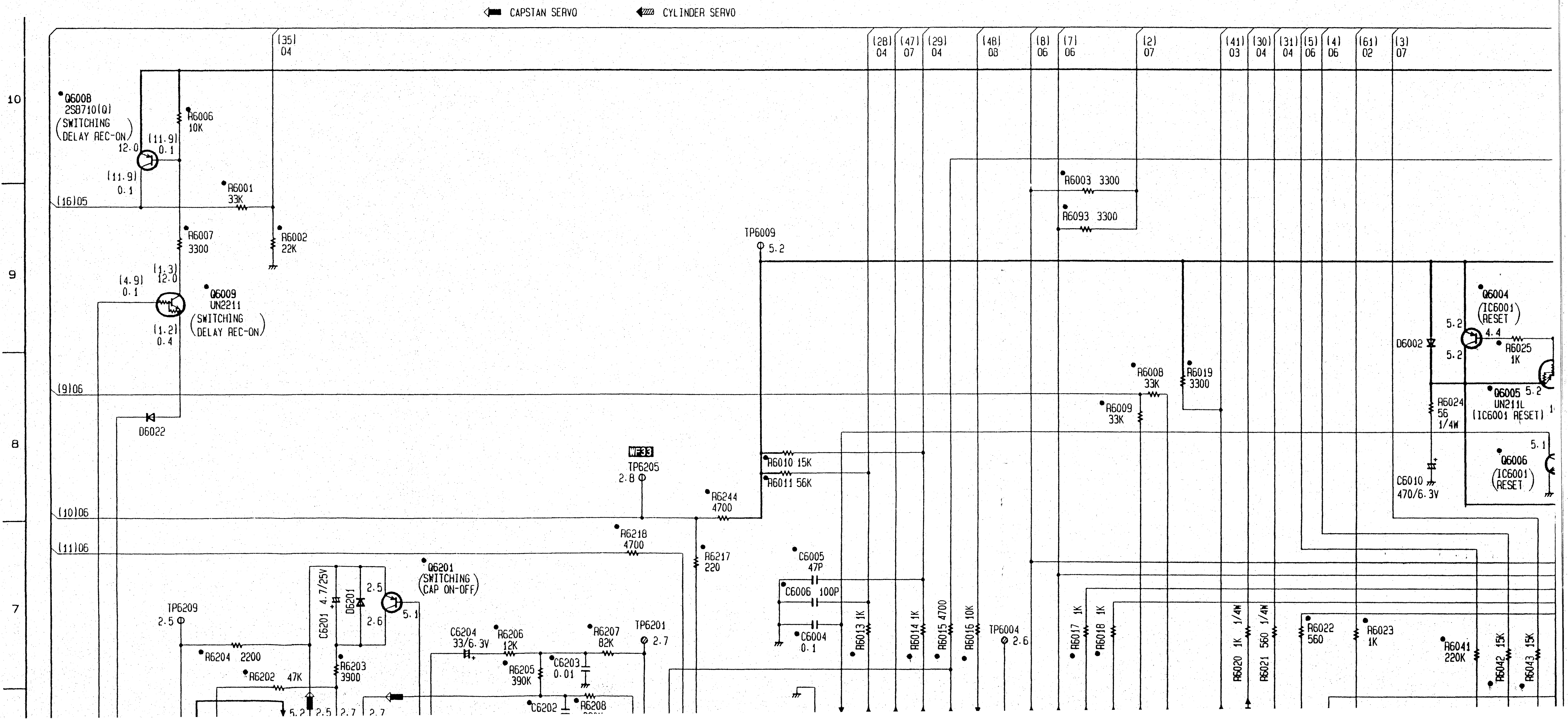
LOCATION GRID NUMBER OF THE OTHER END OF THE LINE

LINE NUMBER

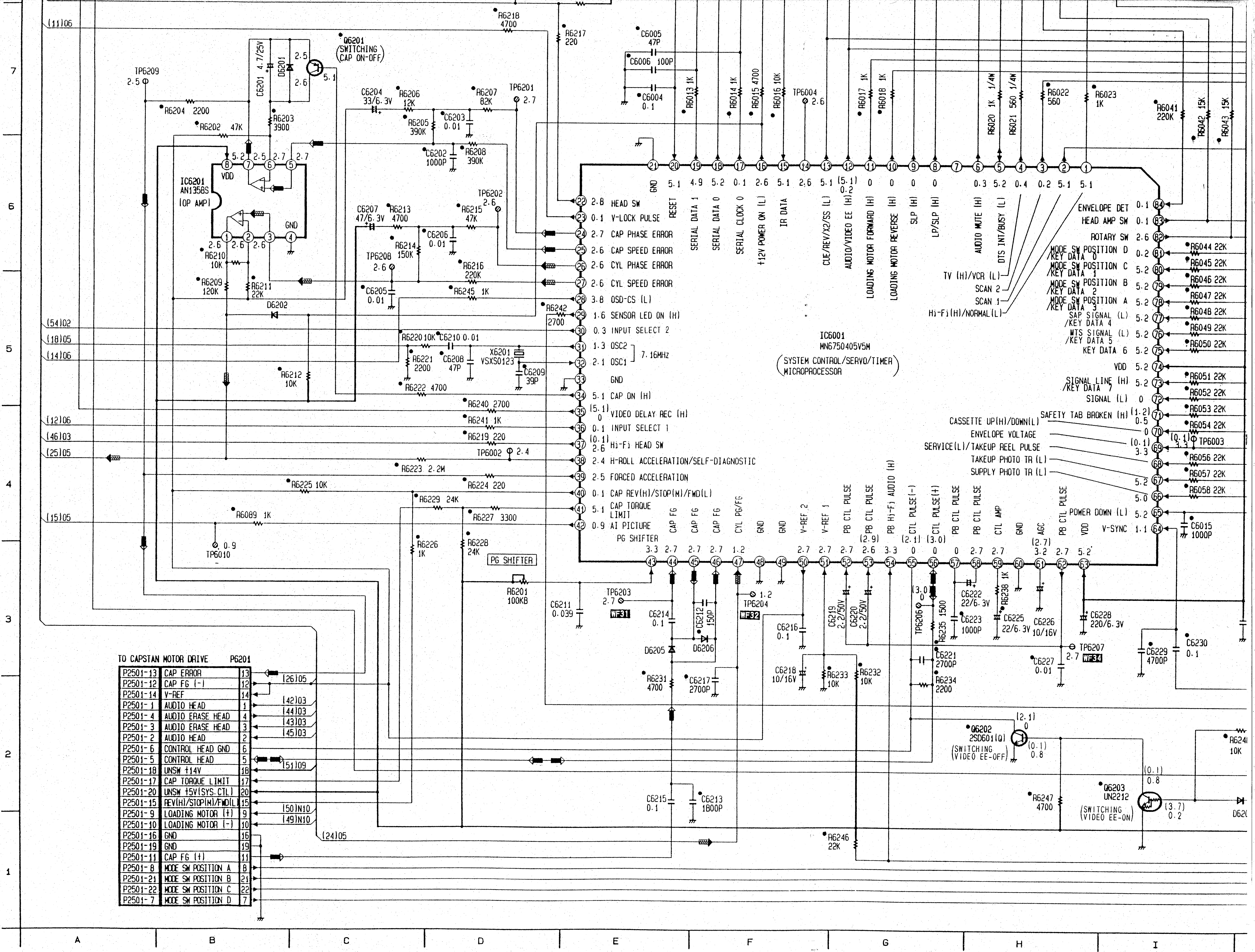
NOTE:

1. DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.
2. TO MAINTAIN ORIGINAL FUNCTION AND RELIABILITY OF REPAIRED UNITS, USE ONLY ORIGINAL REPLACEMENT PARTS WHICH ARE LISTED WITH THEIR PART NUMBERS IN THE PARTS LIST SECTION OF THE SERVICE MANUAL.

IMP
COM
SPE
WHE
USE



CAPSTAN SERVO
CYLINDER SERVO
10
9
8
7
(35) 04
(28) 04
(47) 07
(29) 04
(48) 08
(8) 06
(7) 06
(2) 07
(41) 03
(30) 04
(31) 04
(5) 06
(4) 06
(61) 02
(3) 07
Q6008
2SB710(Q)
(SWITCHING DELAY REC-ON)
12.0
(11.9) 0.1
(11.9) 0.1
R6006 10K
(16)05
R6001 33K
R6007 3300
R6002 22K
(1.3) 12.0
(4.9) 0.1
Q6009
UN2211
(SWITCHING DELAY REC-ON)
(1.2) 0.4
(9)06
D6022
(10)06
(11)06
R6003 3300
R6093 3300
TP6009
5.2
Q6004
(IC6001 RESET)
5.2
4.4
D6002
5.2
R6025 1K
R6008 33K
R6019 3300
R6009 33K
R6024 56 1/4W
Q6005 5.2
UN2211L
(IC6001 RESET)
5.1
Q6006
(IC6001 RESET)
C6010 470/6.3V
WF33
TP6205
2.8
R6010 15K
R6011 56K
R6244 4700
R6218 4700
R6217 220
C6005 47P
C6006 100P
C6004 0.1
Q6201
(SWITCHING CAP ON-OFF)
C6201 4.7/25V
D6201
2.5
2.6
5.1
TP6209
2.5
R6204 2200
R6202 47K
R6203 3900
C6204 33/6.3V
R6206 12K
R6205 390K
C6203 0.01
R6207 82K
TP6201
2.7
C6202
R6208
5.2
2.5
2.7
2.7
R6013 1K
R6014 1K
R6015 4700
R6016 10K
TP6004
2.6
R6017 1K
R6018 1K
R6020 1K 1/4W
R6021 560 1/4W
R6022 560
R6023 1K
R6041 220K
R6042 15K
R6043 15K


IC6001
MN6750405V5M
(SYSTEM CONTROL/SERVO/TIMER MICROPROCESSOR)
IC6201
AN1358S
(OP AMP)
Q6201
(SWITCHING CAP ON-OFF)
Q6202
2SD601(Q)
(SWITCHING VIDEO EE-OFF)
Q6203
UN2212
(SWITCHING VIDEO EE-ON)
X6201
VSXS0123
7.16MHz
PG SHIFTER
R6201
100KB
GND
RESET
SERIAL DATA 1
SERIAL DATA 0
SERIAL CLOCK 0
+12V POWER ON (L)
IR DATA
CUE/REV/X2/SS (L)
AUDIO/VIDEO EE (H)
LOADING MOTOR FORWARD (H)
LOADING MOTOR REVERSE (H)
SLP (H)
LP/SLP (H)
AUDIO MUTE (H)
DTS INT/BUSY (L)
TV (H)/VCR (L)
SCAN 2
SCAN 1
Hi-Fi(H)/NORMAL(L)
HEAD SW
V-LOCK PULSE
CAP PHASE ERROR
CAP SPEED ERROR
CYL PHASE ERROR
CYL SPEED ERROR
OSD-CS (L)
SENSOR LED ON (H)
INPUT SELECT 2
OSC2
OSC1
CAP ON (H)
VIDEO DELAY REC (H)
INPUT SELECT 1
Hi-Fi HEAD SW
H-ROLL ACCELERATION/SELF-DIAGNOSTIC
FORCED ACCELERATION
CAP REV(H)/STOP(M)/FWD(L)
CAP TORQUE LIMIT
AI PICTURE
PG SHIFTER
CAP FG
CYL PG/FG
V-REF 2
V-REF 1
PB CTL PULSE
PB Hi-Fi AUDIO (H)
CTL PULSE(-)
CTL PULSE(+)
CTL AMP
AGC
VDD
V-SYNC
POWER DOWN (L)
ENVELOPE DET
HEAD AMP SW
ROTARY SW
MODE SW POSITION D /KEY DATA 0
MODE SW POSITION C /KEY DATA 1
MODE SW POSITION B /KEY DATA 2
MODE SW POSITION A /KEY DATA 3
SAP SIGNAL (L) /KEY DATA 4
MTS SIGNAL (L) /KEY DATA 5
KEY DATA 6
SIGNAL LINE (H) /KEY DATA 7
SIGNAL (L)
SAFETY TAB BROKEN (H)
CASSETTE UP(H)/DOWN(L)
ENVELOPE VOLTAGE
SERVICE(L)/TAKEUP REEL PULSE
TAKEUP PHOTO TR (L)
SUPPLY PHOTO TR (L)
WF31
WF32
WF34
A
B
C
D
E
F
G
H
I
1
2
3
4
5
6
7

TO CAPSTAN MOTOR DRIVE P6201

P2501-13	CAP ERROR	13
P2501-12	CAP FG (-)	12
P2501-14	V-REF	14
P2501- 1	AUDIO HEAD	1
P2501- 4	AUDIO ERASE HEAD	4
P2501- 3	AUDIO ERASE HEAD	3
P2501- 2	AUDIO HEAD	2
P2501- 6	CONTROL HEAD GND	6
P2501- 5	CONTROL HEAD	5
P2501-18	UNSW +14V	18
P2501-17	CAP TORQUE LIMIT	17
P2501-20	UNSW +5V(SYS.CTL)	20
P2501-15	REV(H)/STOP(M)/FWD(L)	15
P2501- 9	LOADING MOTOR (+)	9
P2501-10	LOADING MOTOR (-)	10
P2501-16	GND	16
P2501-19	GND	19
P2501-11	CAP FG (+)	11
P2501- 8	MODE SW POSITION A	8
P2501-21	MODE SW POSITION B	21
P2501-22	MODE SW POSITION C	22
P2501- 7	MODE SW POSITION D	7

JPPLY/SYSTEM CONTROL/SERVO) SCHEMATIC DIAGRAM (F, G, H)

) OF THE LINE

NOTE:
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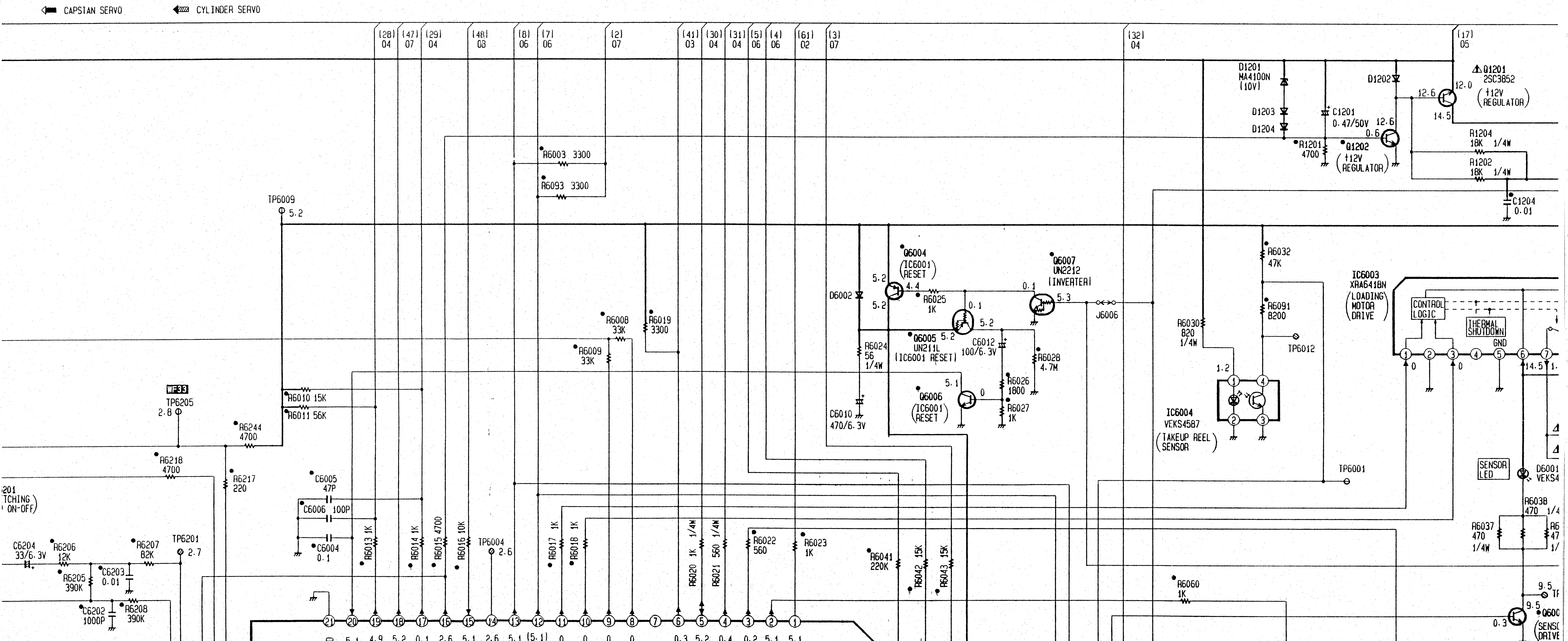
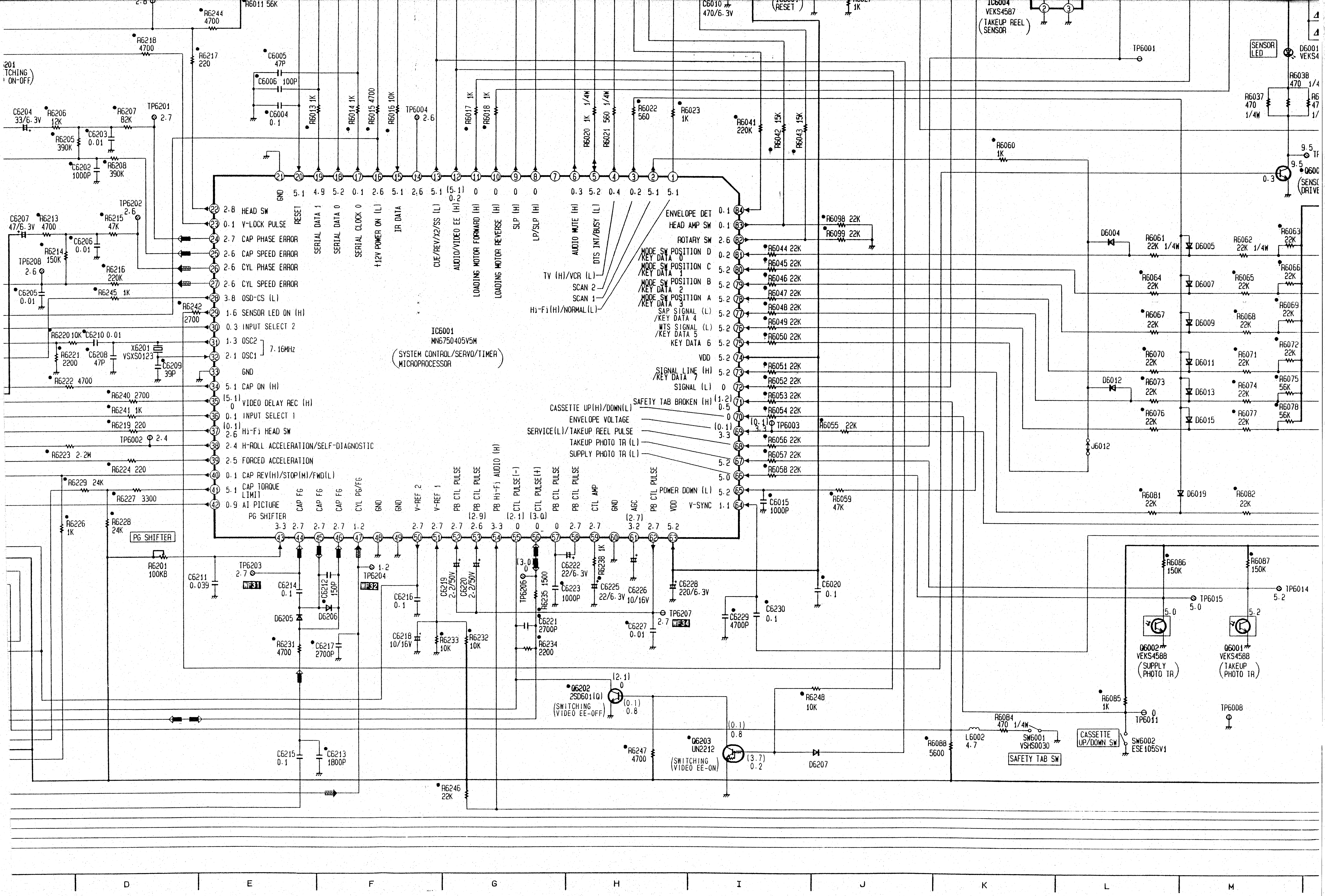
IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS,
USE ONLY THE SPECIFIED PARTS.

NOTE: THE MARK "•" INDICATES LEADLESS (CHIP) COMPONENTS.



CAPSTAN SERVO
CYLINDER SERVO
(28) 04
(47) 07
(29) 04
(48) 03
(8) 06
(7) 06
(2) 07
(41) 03
(30) 04
(31) 04
(5) 06
(4) 06
(61) 02
(3) 07
(32) 04
(17) 05
D1201 MA4100N (10V)
D1202
D1203
D1204
⚠ Q1201 2SC3852 (+12V REGULATOR)
C1201 0.47/50V
R1201 4700
Q1202 (+12V REGULATOR)
R1204 18K 1/4W
R1202 18K 1/4W
C1204 0.01
12.6
12.0
14.5
0.6
R6003 3300
R6093 3300
TP6009 5.2
Q6004 (IC6001 RESET)
Q6007 UN2212 (INVERTER)
Q6005 UN211L (IC6001 RESET)
Q6006 (IC6001 RESET)
R6025 1K
D6002
R6024 56 1/4W
C6010 470/6.3V
C6012 100/6.3V
R6028 4.7M
R6026 1800
R6027 1K
J6006
R6032 47K
R6091 8200
TP6012
R6030 820 1/4W
IC6003 XRA641BN (LOADING MOTOR DRIVE)
CONTROL LOGIC
THERMAL SHUTDOWN
GND
IC6004 VEKS4587 (TAKEUP REEL SENSOR)
TP6001
SENSOR LED
D6001 VEKS4
R6038 470 1/4
R6037 470 1/4W
R6008 33K
R6019 3300
R6009 33K
WF33
TP6205 2.8
R6244 4700
R6010 15K
R6011 56K
R6218 4700
R6217 220
C6005 47P
C6006 100P
C6004 0.1
R6013 1K
R6014 1K
R6015 4700
R6016 10K
TP6004 2.6
R6017 1K
R6018 1K
R6020 1K 1/4W
R6021 560 1/4W
R6022 560
R6023 1K
R6041 220K
R6042 15K
R6043 15K
R6060 1K
TP6201 2.7
C6204 33/6.3V
R6206 12K
R6207 82K
R6205 390K
C6203 0.01
C6202 1000P
R6208 390K
Q600 (SENSO DRIVE)


IC6001
MN6750405V5M
(SYSTEM CONTROL/SERVO/TIMER MICROPROCESSOR)
GND
RESET
SERIAL DATA 1
SERIAL DATA 0
SERIAL CLOCK 0
+12V POWER ON (L)
IR DATA
CUE/REV/X2/SS (L)
AUDIO/VIDEO EE (H)
LOADING MOTOR FORWARD (H)
LOADING MOTOR REVERSE (H)
SLP (H)
LP/SLP (H)
AUDIO MUTE (H)
DTS INT/BUSY (L)
TV (H)/VCR (L)
SCAN 2
SCAN 1
Hi-Fi (H)/NORMAL (L)
2.8 HEAD SW
0.1 V-LOCK PULSE
2.7 CAP PHASE ERROR
2.6 CAP SPEED ERROR
2.6 CYL PHASE ERROR
2.6 CYL SPEED ERROR
3.8 OSD-CS (L)
1.6 SENSOR LED ON (H)
0.3 INPUT SELECT 2
1.3 OSC2
2.1 OSC1
7.16MHz
GND
5.1 CAP ON (H)
(5.1) 0 VIDEO DELAY REC (H)
0.1 INPUT SELECT 1
(0.1) 2.6 Hi-Fi HEAD SW
2.4 H-ROLL ACCELERATION/SELF-DIAGNOSTIC
2.5 FORCED ACCELERATION
0.1 CAP REV(H)/STOP(M)/FWD(L)
5.1 CAP TORQUE LIMIT
0.9 AI PICTURE
PG SHIFTER
CAP FG
CAP FG
CAP FG
CYL PG/FG
GND
GND
V-REF 2
V-REF 1
PB CTL PULSE
PB CTL PULSE
PB Hi-Fi AUDIO (H)
CTL PULSE(-)
CTL PULSE(+)
PB CTL PULSE
PB CTL PULSE
CTL AMP
GND
AGC
PB CTL PULSE
VDD
ENVELOPE DET 0.1
HEAD AMP SW 0.1
ROTARY SW 2.6
MODE SW POSITION D /KEY DATA 0 0.2
MODE SW POSITION C /KEY DATA 1 5.2
MODE SW POSITION B /KEY DATA 2 5.2
MODE SW POSITION A /KEY DATA 3 5.2
SAP SIGNAL (L) /KEY DATA 4 5.2
MTS SIGNAL (L) /KEY DATA 5 5.2
KEY DATA 6 5.2
VDD 5.2
SIGNAL LINE (H) /KEY DATA 7 5.2
SIGNAL (L) 0
SAFETY TAB BROKEN (H) (1.2) 0.5
CASSETTE UP(H)/DOWN(L)
ENVELOPE VOLTAGE 0
SERVICE(L)/TAKEUP REEL PULSE (0.1) 3.3
TAKEUP PHOTO TR (L)
SUPPLY PHOTO TR (L) 5.2
5.0
POWER DOWN (L) 5.2
V-SYNC 1.1
X6201 VSXS0123
C6209 39P
R6201 100KB
PG SHIFTER
TP6201 2.7
TP6202 2.6
TP6208 2.6
TP6002 2.4
TP6203 2.7
WF31
TP6204 1.2
WF32
TP6206
TP6207 2.7
WF34
TP6004 2.6
TP6003
TP6001
TP6011 0
TP6015 5.0
TP6014 5.2
TP6008
J6012
D6004
D6005
D6007
D6009
D6011
D6012
D6013
D6015
D6019
D6205
D6206
D6207
Q6202 2SD601(Q) (SWITCHING VIDEO EE-OFF)
Q6203 UN2212 (SWITCHING VIDEO EE-ON)
Q6002 VEKS4588 (SUPPLY PHOTO TR)
Q6001 VEKS4588 (TAKEUP PHOTO TR)
IC6004 VEKS4587 (TAKEUP REEL SENSOR)
SENSOR LED
D6001 VEKS4
SW6001 VSHS0030
SAFETY TAB SW
SW6002 ESE105SV1
CASSETTE UP/DOWN SW
L6002 4.7
R6084 470 1/4W
R6085 1K
R6088 5600
R6086 150K
R6087 150K
R6037 470 1/4W
R6038 470
R6060 1K
R6061 22K 1/4W
R6062 22K 1/4W
R6063 22K
R6064 22K
R6065 22K
R6066 22K
R6067 22K
R6068 22K
R6069 22K
R6070 22K
R6071 22K
R6072 22K
R6073 22K
R6074 22K
R6075 56K
R6076 22K
R6077 22K
R6078 56K
R6081 22K
R6082 22K
R6098 22K
R6099 22K
R6044 22K
R6045 22K
R6046 22K
R6047 22K
R6048 22K
R6049 22K
R6050 22K
R6051 22K
R6052 22K
R6053 22K
R6054 22K
R6055 22K
R6056 22K
R6057 22K
R6058 22K
R6059 47K
C6015 1000P
R6041 220K
R6042 15K
R6043 15K
R6022 560
R6023 1K
R6020 1K 1/4W
R6021 560 1/4W
R6017 1K
R6018 1K
R6013 1K
R6014 1K
R6015 4700
R6016 10K
C6005 47P
C6006 100P
C6004 0.1
R6011 56K
C6010 470/6.3V
R6244 4700
R6218 4700
R6217 220
C6204 33/6.3V
R6206 12K
R6205 390K
C6203 0.01
R6207 82K
C6202 1000P
R6208 390K
C6207 47/6.3V
R6213 4700
R6215 47K
C6206 0.01
R6214 150K
R6216 220K
C6205 0.01
R6245 1K
R6242 2700
R6220 10K
C6210 0.01
R6221 2200
C6208 47P
R6222 4700
R6240 2700
R6241 1K
R6219 220
R6223 2.2M
R6224 220
R6229 24K
R6227 3300
R6226 1K
R6228 24K
C6211 0.039
C6214 0.1
C6212 150P
R6231 4700
C6217 2700P
C6215 0.1
C6213 1800P
C6216 0.1
C6218 10/16V
R6233 10K
R6232 10K
C6219 2.2/50V
C6220 2.2/50V
R6235 1500
C6221 2700P
R6234 2200
C6222 22/6.3V
C6223 1000P
R6238 1K
C6225 22/6.3V
C6226 10/16V
C6227 0.01
C6228 220/6.3V
C6229 4700P
C6230 0.1
C6020 0.1
R6246 22K
R6247 4700
R6248 10K
9.5
0.3
D
E
F
G
H
I
J
K
L
M

GRAM (F, G, H)

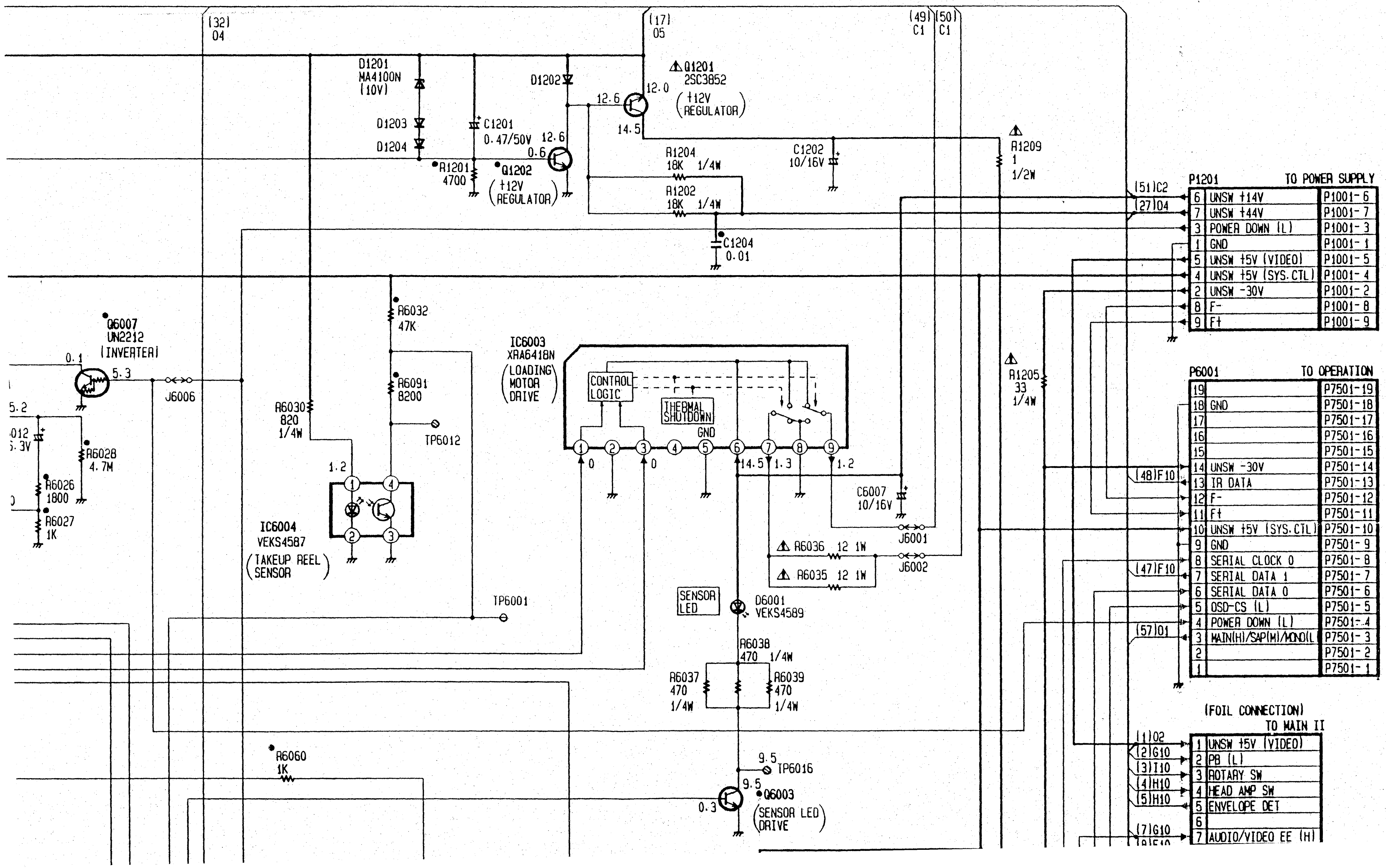
TANT SAFETY NOTICE:
NENTS IDENTIFIED BY THE SIGN ⚠ HAVE
AL CHARACTERISTICS IMPORTANT FOR SAFETY.
REPLACING ANY OF THESE COMPONENTS,
NLY THE SPECIFIED PARTS.

NOTE: THE MARK "•" INDICATES LEADLESS (CHIP) COMPONENTS.

TEST POINT INFORMATION
- ⦶ : TEST POINT WITH A JUMPER WIRE ACROSS A HOLE IN THE P.C.B.
- ▭→ : TEST POINT WITH A COMPONENT LEAD ON THE FOIL SIDE.
- ⊘ : TEST POINT WITH NO TEST PIN.
- ● : TEST POINT WITH A TEST PIN.

COMPARISON CHART OF MODELS & MARKS

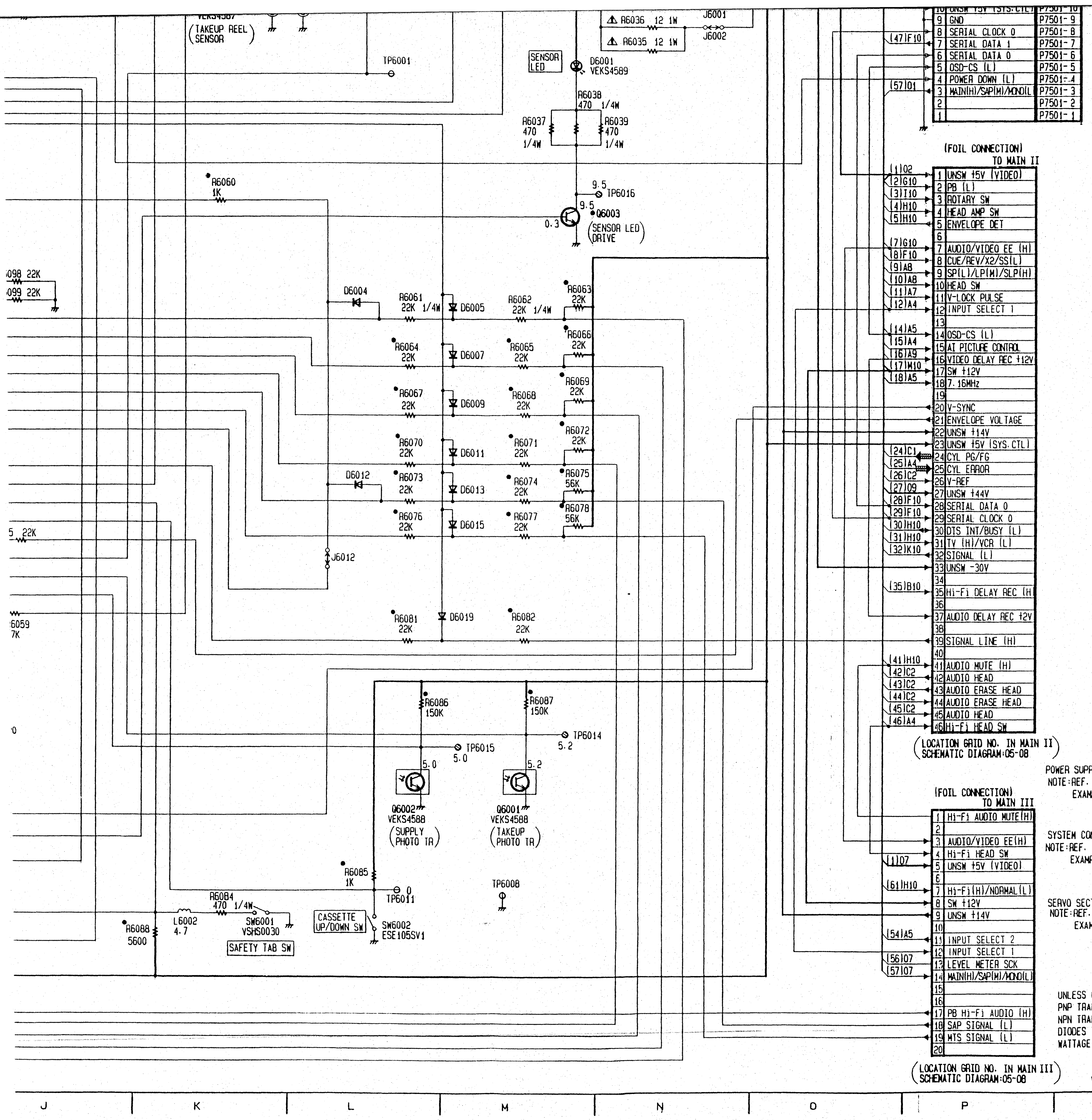
MODEL	MARK
PV-4308	A
PV-4311	B
PV-4311-K	C
PV-4315S	D
PV-4325E	E
PV-4351	F
PV-4351-K	G
PV-4358	H
PV-4355S	I



(32) 04
(17) 05
(49) C1
(50) C1
D1201
MA4100N
(10V)
D1203
D1204
D1202
C1201
0.47/50V
R1201
4700
Q1202
(+12V REGULATOR)
12.6
0.6
⚠ Q1201
2SC3852
(+12V REGULATOR)
12.6
12.0
14.5
R1204
18K 1/4W
R1202
18K 1/4W
C1202
10/16V
C1204
0.01
⚠ R1209
1
1/2W
Q6007
UN2212
(INVERTER)
0.1
5.3
5.2
J6006
012
5.3V
R6028
4.7M
R6026
1800
R6027
1K
R6030
820
1/4W
R6032
47K
R6091
8200
TP6012
1.2
IC6004
VEKS4587
(TAKEUP REEL SENSOR)
TP6001
IC6003
XRA6418N
(LOADING MOTOR DRIVE)
CONTROL LOGIC
THERMAL SHUTDOWN
GND
0
0
14.5
1.3
1.2
C6007
10/16V
J6001
J6002
⚠ R6036 12 1W
⚠ R6035 12 1W
SENSOR LED
D6001
VEKS4589
R6038
470 1/4W
R6037
470
1/4W
R6039
470
1/4W
R6060
1K
9.5
TP6016
9.5
Q6003
(SENSOR LED DRIVE)
0.3
⚠ R1205
33
1/4W
(51) C2
(27) 04
(48) F10
(47) F10
(57) 01
P1201 TO POWER SUPPLY
6 UNSW +14V P1001-6
7 UNSW +44V P1001-7
3 POWER DOWN (L) P1001-3
1 GND P1001-1
5 UNSW +5V (VIDEO) P1001-5
4 UNSW +5V (SYS. CTL) P1001-4
2 UNSW -30V P1001-2
8 F- P1001-8
9 F+ P1001-9
P6001 TO OPERATION
19 P7501-19
18 GND P7501-18
17 P7501-17
16 P7501-16
15 P7501-15
14 UNSW -30V P7501-14
13 IR DATA P7501-13
12 F- P7501-12
11 F+ P7501-11
10 UNSW +5V (SYS. CTL) P7501-10
9 GND P7501-9
8 SERIAL CLOCK 0 P7501-8
7 SERIAL DATA 1 P7501-7
6 SERIAL DATA 0 P7501-6
5 OSD-CS (L) P7501-5
4 POWER DOWN (L) P7501-4
3 MAIN(H)/SAP(M)/MONO(L P7501-3
2 P7501-2
1 P7501-1
(FOIL CONNECTION)
TO MAIN II
(1) 02
(2) G10
(3) I10
(4) H10
(5) H10
(7) G10
1 UNSW +5V (VIDEO)
2 PB (L)
3 ROTARY SW
4 HEAD AMP SW
5 ENVELOPE DET
6
7 AUDIO/VIDEO EE (H)

POWER SUPPLY SECTION	
TRANSISTOR	
Q1201	M-10
Q1202	L-10
CONNECTOR	
P1201	P-10

SYSTEM CONTROL SECTION	
TRANSISTOR	
Q6001	L-3
Q6002	M-3
Q6003	N-6
Q6004	I-9
Q6005	I-8
Q6006	I-8
Q6007	J-9
Q6008	A-10
Q6009	B-9
IC	
IC6001	F-5
IC6003	L-9
IC6004	K-8
CONNECTOR	
P6001	P-9


(TAKEUP REEL SENSOR)
TP6001
⚠ R6036 12 1W
⚠ R6035 12 1W
J6001
J6002
SENSOR LED
D6001
VEKS4589
R6038
470 1/4W
R6037
470
1/4W
R6039
470
1/4W
9.5
TP6016
9.5
Q6003
0.3
(SENSOR LED DRIVE)
R6060
1K
098 22K
099 22K
D6004
R6061
22K 1/4W
D6005
R6062
22K 1/4W
R6063
22K
R6064
22K
D6007
R6065
22K
R6066
22K
R6067
22K
D6009
R6068
22K
R6069
22K
R6070
22K
D6011
R6071
22K
R6072
22K
D6012
R6073
22K
D6013
R6074
22K
R6075
56K
R6076
22K
D6015
R6077
22K
R6078
56K
5 22K
J6012
6059
7K
R6081
22K
D6019
R6082
22K
R6086
150K
R6087
150K
TP6014
5.2
TP6015
5.0
5.0
5.2
Q6002
VEKS4588
(SUPPLY PHOTO TR)
Q6001
VEKS4588
(TAKEUP PHOTO TR)
R6085
1K
0
TP6011
TP6008
R6084
470 1/4W
R6088
5600
L6002
4.7
SW6001
VSHS0030
SAFETY TAB SW
CASSETTE UP/DOWN SW
SW6002
ESE105SV1
(47)F10
(57)01
10 UNSW +5V (SYS.CTL) P7501-10
9 GND P7501-9
8 SERIAL CLOCK 0 P7501-8
7 SERIAL DATA 1 P7501-7
6 SERIAL DATA 0 P7501-6
5 OSD-CS (L) P7501-5
4 POWER DOWN (L) P7501-4
3 MAIN(H)/SAP(M)/MONO(L) P7501-3
2 P7501-2
1 P7501-1
(FOIL CONNECTION)
TO MAIN II
(1)02
(2)G10
(3)I10
(4)H10
(5)H10
(7)G10
(8)F10
(9)A8
(10)A8
(11)A7
(12)A4
(14)A5
(15)A4
(16)A9
(17)M10
(18)A5
(24)C1
(25)A4
(26)C2
(27)09
(28)F10
(29)F10
(30)H10
(31)H10
(32)K10
(35)B10
(41)H10
(42)C2
(43)C2
(44)C2
(45)C2
(46)A4
1 UNSW +5V (VIDEO)
2 PB (L)
3 ROTARY SW
4 HEAD AMP SW
5 ENVELOPE DET
6
7 AUDIO/VIDEO EE (H)
8 CUE/REV/X2/SS(L)
9 SP(L)/LP(M)/SLP(H)
10 HEAD SW
11 V-LOCK PULSE
12 INPUT SELECT 1
13
14 OSD-CS (L)
15 AI PICTURE CONTROL
16 VIDEO DELAY REC +12V
17 SW +12V
18 7.16MHz
19
20 V-SYNC
21 ENVELOPE VOLTAGE
22 UNSW +14V
23 UNSW +5V (SYS.CTL)
24 CYL PG/FG
25 CYL ERROR
26 V-REF
27 UNSW +44V
28 SERIAL DATA 0
29 SERIAL CLOCK 0
30 DTS INT/BUSY (L)
31 TV (H)/VCR (L)
32 SIGNAL (L)
33 UNSW -30V
34
35 Hi-Fi DELAY REC (H)
36
37 AUDIO DELAY REC +12V
38
39 SIGNAL LINE (H)
40
41 AUDIO MUTE (H)
42 AUDIO HEAD
43 AUDIO ERASE HEAD
44 AUDIO ERASE HEAD
45 AUDIO HEAD
46 Hi-Fi HEAD SW
(LOCATION GRID NO. IN MAIN II SCHEMATIC DIAGRAM:05-08)
(FOIL CONNECTION)
TO MAIN III
(1)07
(6)H10
(54)A5
(56)07
(57)07
1 Hi-Fi AUDIO MUTE(H)
2
3 AUDIO/VIDEO EE(H)
4 Hi-Fi HEAD SW
5 UNSW +5V (VIDEO)
6
7 Hi-Fi(H)/NORMAL(L)
8 SW +12V
9 UNSW +14V
10
11 INPUT SELECT 2
12 INPUT SELECT 1
13 LEVEL METER SCK
14 MAIN(H)/SAP(M)/MONO(L)
15
16
17 PB Hi-Fi AUDIO (H)
18 SAP SIGNAL (L)
19 MTS SIGNAL (L)
20
(LOCATION GRID NO. IN MAIN III SCHEMATIC DIAGRAM:05-08)
J
K
L
M
N
O
P
Q

Q6002	M-3
Q6003	N-6
Q6004	I-9
Q6005	I-8
Q6006	I-8
Q6007	J-9
Q6008	A-10
Q6009	B-9
IC	
IC6001	F-5
IC6003	L-9
IC6004	K-8
CONNECTOR	
P6001	P-9
TEST POINT	
TP6001	L-7
TP6002	D-4
TP6003	I-4
TP6004	F-7
TP6008	M-2
TP6009	E-9
TP6010	B-3
TP6011	L-2
TP6012	L-8
TP6014	M-3
TP6015	M-3
TP6016	N-8

POWER SUPPLY SECTION
NOTE: REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE: C.B.A.…R2. REF. NO. 1200 SERIES.
SCHEMATIC DIAGRAM…R1202
(R1202 IS ABBREVIATED TO R2.)

SYSTEM CONTROL SECTION
NOTE: REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE: C.B.A.…R2. REF. NO. 6000 SERIES.
SCHEMATIC DIAGRAM…R 6002
(R 6002 IS ABBREVIATED TO R2.)

SERVO SECTION
NOTE: REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE: C.B.A.…R2. REF. NO. 6200 SERIES.
SCHEMATIC DIAGRAM…R6202
(R6202 IS ABBREVIATED TO R2.)

SERVO SECTION	
TRANSISTOR	
Q6201	C-7
Q6202	H-2
Q6203	I-2
IC	
IC6201	B-6
CONNECTOR	
P6201	B-3
TEST POINT	
TP6201	D-7
TP6202	D-6
TP6203	E-3
TP6204	F-3
TP6205	D-8
TP6206	G-3
TP6207	H-3
TP6208	C-6
TP6209	A-7
ADJUSTMENT	
R6201	D-3

UNLESS OTHERWISE SPECIFIED;
PNP TRANSISTORS IS 2SA1037K(R).
NPN TRANSISTORS IS 2SC2412K(R).
DIODES IS MA713A AND
WATTAGE OF RESISTORS IS 1/8W.

VJBS02198

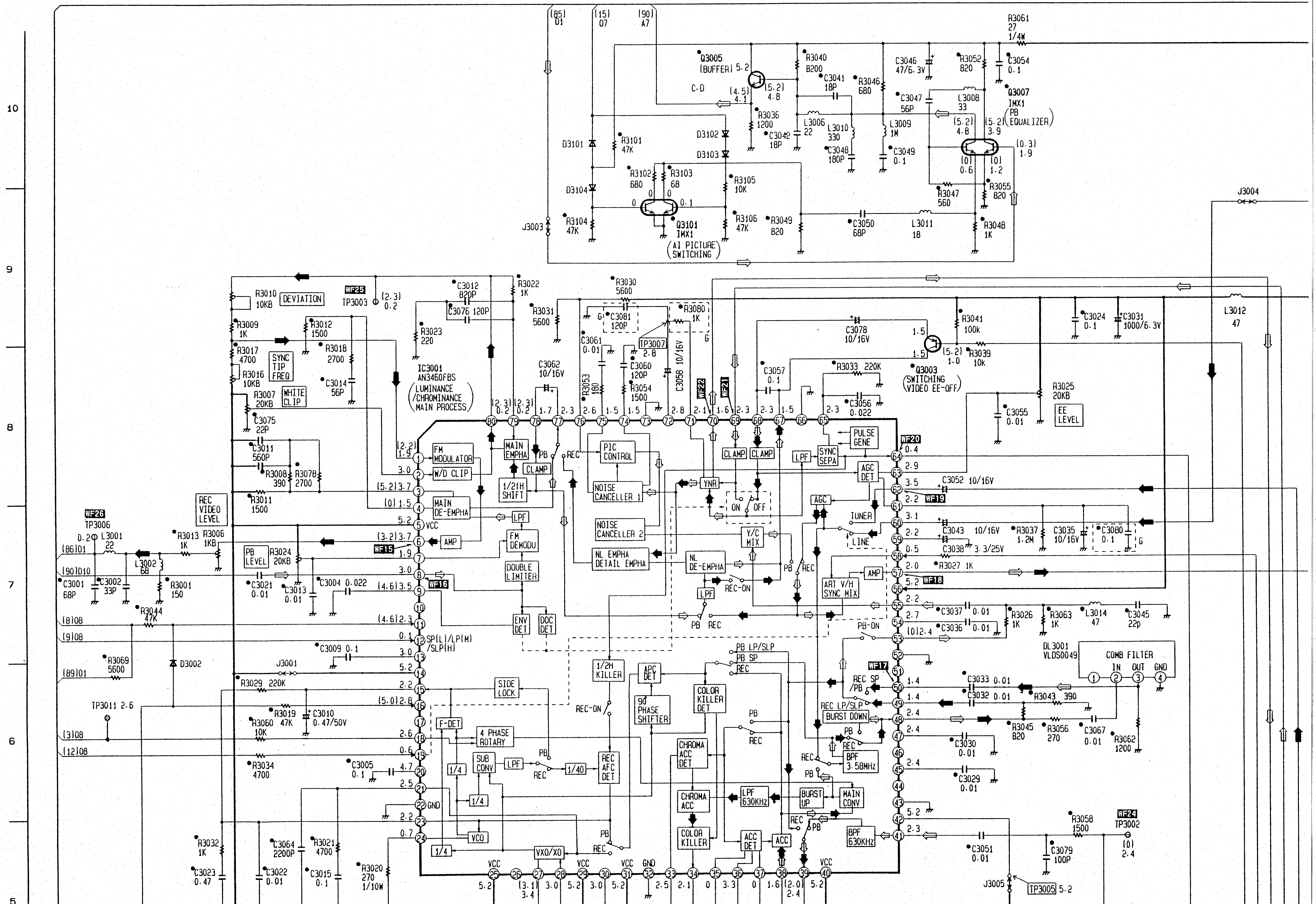
MAIN II (SIGNAL PROCESS/AUDIO) SCHEMATIC DIAGRAM (F, G, H)

NOTE: HOW TO READ CONVERGED LINES

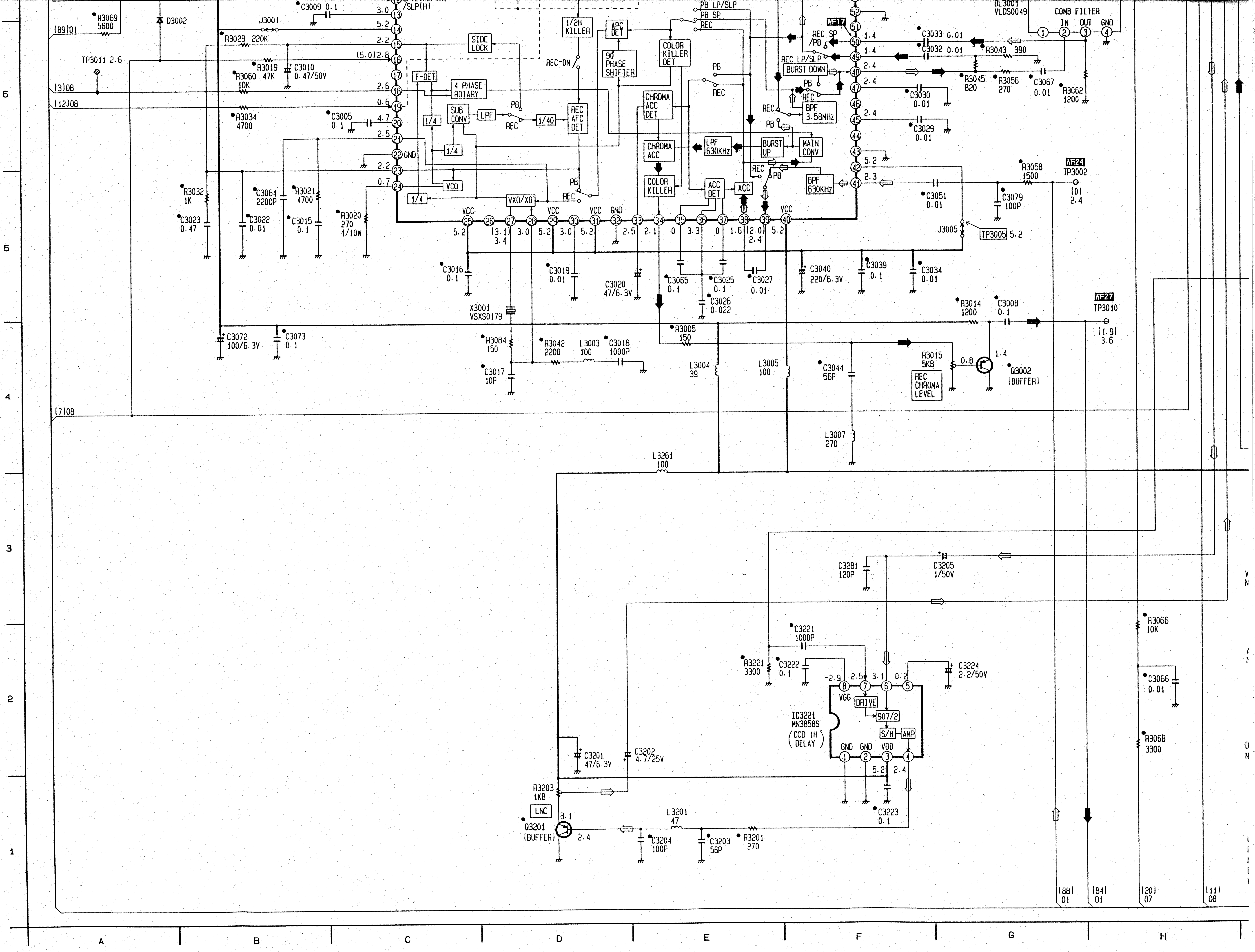
(100) B4
- LOCATION GRID NUMBER OF THE OTHER END OF THE LINE
- LINE NUMBER

NOTE:
1. DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.
2. TO MAINTAIN ORIGINAL FUNCTION AND RELIABILITY OF REPAIRED UNITS, USE ONLY ORIGINAL REPLACEMENT PARTS WHICH ARE LISTED WITH THEIR PART NUMBERS IN THE PARTS LIST SECTION OF THE SERVICE MANUAL.

⬅ REC VIDEO SIGNAL ⇦ PB VIDEO SIGNAL ⬅ REC AUDIO SIGNAL ⇦ PB AUDIO SIGNAL ▨ CYLINDER SERVO



10
9
8
7
6
5
(85) D1
(15) 07
(90) A7
Q3005 (BUFFER)
Q3007 IMX1 (PB EQUALIZER)
Q3101 IMX1 (AI PICTURE SWITCHING)
Q3003 (SWITCHING VIDEO EE-OFF)
IC3001 AN3460FBS (LUMINANCE /CHROMINANCE MAIN PROCESS)
D3101
D3102
D3103
D3104
D3002
J3003
J3004
J3001
J3005
R3061 27 1/4W
R3040 8200
C3041 18P
R3046 680
C3046 47/6.3V
R3052 820
C3054 0.1
C3047 56P
L3008 33
R3036 1200
C3042 18P
L3006 22
L3010 330
L3009 1M
C3048 180P
C3049 0.1
R3101 47K
R3102 680
R3103 68
R3105 10K
R3104 47K
R3106 47K
R3049 820
C3050 68P
L3011 18
R3047 560
R3055 820
R3048 1K
R3010 10KB
DEVIATION
WF25 TP3003
C3012 820P
C3076 120P
R3022 1K
R3030 5600
R3080 1K
C3081 120P
R3009 1K
R3012 1500
R3017 4700
SYNC TIP FREQ
R3018 2700
R3016 10KB
R3007 20KB
WHITE CLIP
C3014 56P
C3075 22P
C3011 560P
R3008 390
R3078 2700
R3011 1500
R3023 220
R3031 5600
C3061 0.01
TP3007
C3060 120P
R3054 1500
R3053 180
C3058 10/16V
C3062 10/16V
C3057 0.1
C3078 10/16V
R3033 220K
C3056 0.022
R3041 100k
R3039 10k
R3025 20KB
EE LEVEL
C3055 0.01
C3024 0.1
C3031 1000/6.3V
L3012 47
WF22
WF21
WF20
WF19
WF18
WF17
WF16
WF15
WF24 TP3002
WF26 TP3006
L3001 22
L3002 68
C3001 68P
C3002 33P
R3001 150
R3013 1K
R3006 1KB
REC VIDEO LEVEL
PB LEVEL
R3024 20KB
C3021 0.01
C3013 0.01
C3004 0.022
R3044 47K
R3069 5600
C3009 0.1
R3029 220K
TP3011 2.6
R3019 47K
C3010 0.47/50V
R3060 10K
R3034 4700
C3005 0.1
R3032 1K
C3023 0.47
C3064 2200P
C3022 0.01
R3021 4700
C3015 0.1
R3020 270 1/10W
(86) D1
(90) D10
(8) 08
(9) 08
(89) D1
(3) 08
(12) 08
FM MODULATOR
W/D CLIP
MAIN DE-EMPHA
AMP
MAIN EMPHA
CLAMP
1/2H SHIFT
LPF
FM DEMODU
DOUBLE LIMITER
ENV DET
DOC DET
PIC CONTROL
NOISE CANCELER 1
NOISE CANCELER 2
NL EMPHA DETAIL EMPHA
NL DE-EMPHA
YNR
ON OFF
Y/C MIX
CLAMP
LPF
SYNC SEPA
PULSE GENE
AGC DET
AGC
TUNER
LINE
ART V/H SYNC MIX
AMP
REC-ON
PB REC
PB-ON
SIDE LOCK
F-DET
4 PHASE ROTARY
SUB CONV
1/4
1/40
REC AFC DET
1/2H KILLER
APC DET
90 PHASE SHIFTER
COLOR KILLER DET
CHROMA ACC DET
CHROMA ACC
COLOR KILLER
LPF 630KHz
ACC DET
ACC
BURST UP
MAIN CONV
BPF 3.58MHz
BPF 630KHz
BURST DOWN
VCO
VXO/XO
PB LP/SLP
PB SP
REC SP /PB
REC LP/SLP
SP(L)/LP(M) /SLP(H)
VCC
GND
C3052 10/16V
C3043 10/16V
C3038 3.3/25V
R3037 1.2M
C3035 10/16V
C3080 0.1
R3027 1K
C3037 0.01
C3036 0.01
R3026 1K
R3063 1K
L3014 47
C3045 22p
DL3001 VLDS0049
COMB FILTER
IN OUT GND
C3033 0.01
C3032 0.01
R3043 390
R3045 820
R3056 270
C3067 0.01
R3062 1200
C3030 0.01
C3029 0.01
R3058 1500
C3051 0.01
C3079 100P
TP3005 5.2



R3069 5600
D3002
(89)01
C3009 0.1
J3001
R3029 220K
R3019 47K
C3010 0.47/50V
R3060 10K
TP3011 2.6
(3)08
(12)08
R3034 4700
C3005 0.1
R3032 1K
C3023 0.47
C3064 2200P
C3022 0.01
R3021 4700
C3015 0.1
R3020 270 1/10W
SLP(H)
SIDE LOCK
F-DET
4 PHASE ROTARY
SUB CONV
LPF
1/40
REC AFC DET
1/4
VCO
VXO/XO
1/2H KILLER
APC DET
90° PHASE SHIFTER
COLOR KILLER DET
CHROMA ACC DET
CHROMA ACC
COLOR KILLER
LPF 630KHz
BURST UP
MAIN CONV
ACC DET
ACC
BPF 630KHz
BPF 3.58MHz
BURST DOWN
REC-ON
PB LP/SLP
PB SP
REC
PB
REC SP /PB
REC LP/SLP
WF17
WF24
WF27
VCC
GND
C3033 0.01
C3032 0.01
R3043 390
R3045 820
R3056 270
C3067 0.01
R3062 1200
C3030 0.01
C3029 0.01
DL3001 VLDS0049
COMB FILTER
IN OUT GND
R3058 1500
TP3002
C3051 0.01
C3079 100P
J3005
TP3005 5.2
C3016 0.1
C3019 0.01
C3020 47/6.3V
C3065 0.1
C3025 0.1
C3026 0.022
C3027 0.01
C3040 220/6.3V
C3039 0.1
C3034 0.01
X3001 VSXS0179
R3014 1200
C3008 0.1
TP3010
C3072 100/6.3V
C3073 0.1
R3084 150
C3017 10P
R3042 2200
L3003 100
C3018 1000P
R3005 150
L3004 39
L3005 100
C3044 56P
R3015 5KB
REC CHROMA LEVEL
Q3002 (BUFFER)
(7)08
L3007 270
L3261 100
C3281 120P
C3205 1/50V
R3066 10K
C3066 0.01
R3068 3300
C3221 1000P
R3221 3300
C3222 0.1
C3224 2.2/50V
VGG
DRIVE
907/2
S/H
AMP
IC3221 MN3858S (CCD 1H DELAY)
GND GND VDD
C3201 47/6.3V
C3202 4.7/25V
R3203 1KB
LNC
Q3201 (BUFFER)
L3201 47
C3204 100P
C3203 56P
R3201 270
C3223 0.1
(88) 01
(84) 01
(20) 07
(11) 08
A B C D E F G H
1 2 3 4 5 6

SS/AUDIO) SCHEMATIC DIAGRAM (F, G, H)

HER END OF THE LINE

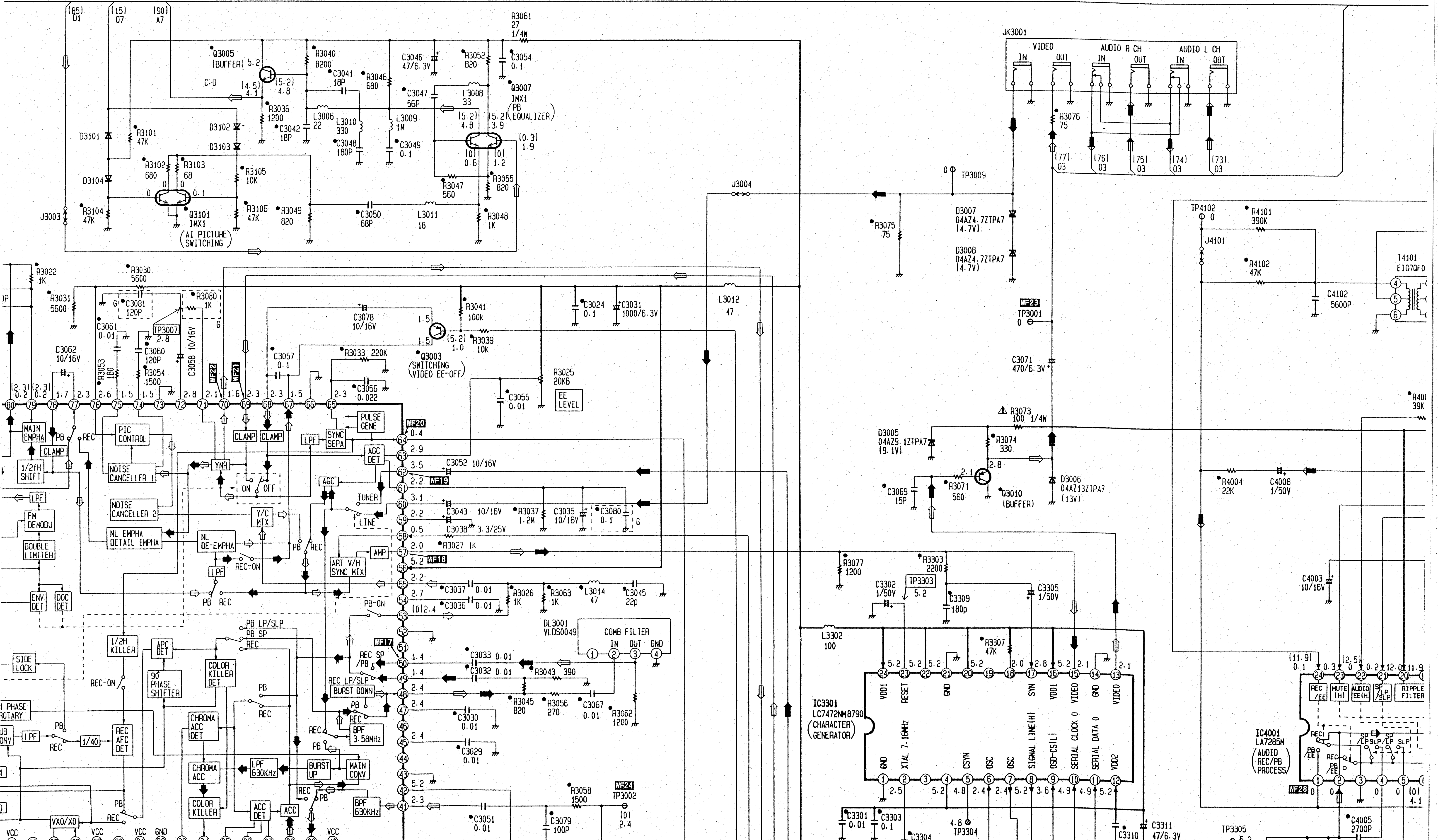
PB AUDIO SIGNAL

CYLINDER SERVO

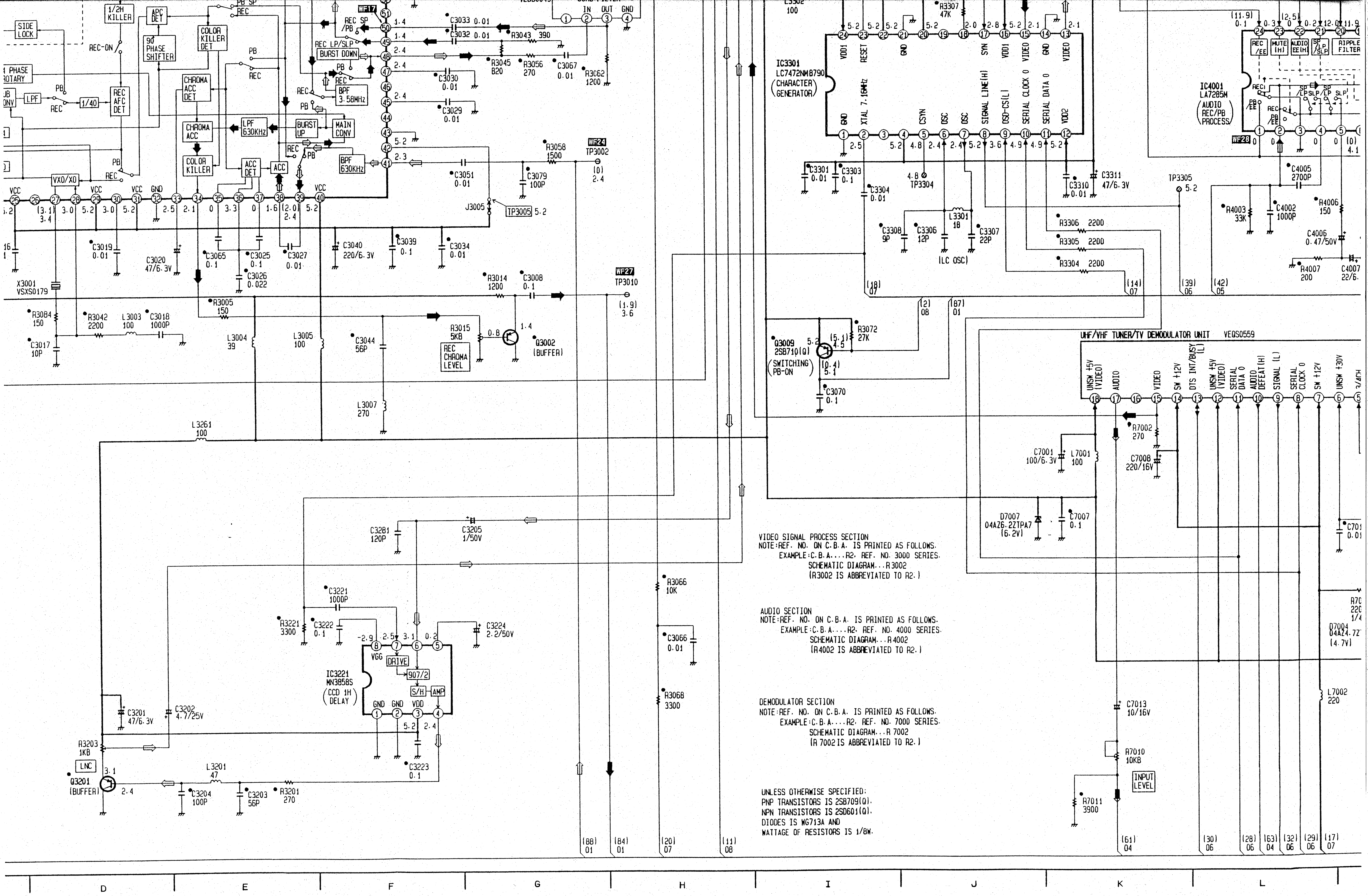
NOTE:
1. DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.
2. TO MAINTAIN ORIGINAL FUNCTION AND RELIABILITY OF REPAIRED UNITS, USE ONLY ORIGINAL REPLACEMENT PARTS WHICH ARE LISTED WITH THEIR PART NUMBERS IN THE PARTS LIST SECTION OF THE SERVICE MANUAL.

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS,
USE ONLY THE SPECIFIED PARTS.

NOTE: THE MARK "•" INDICATES LEAD (CHIP) COMPONENTS.



Q3005 (BUFFER)
C.D
Q3101 IMX1 (AI PICTURE SWITCHING)
Q3007 IMX1 (PB EQUALIZER)
J3003
J3004
JK3001
VIDEO IN OUT
AUDIO R CH IN OUT
AUDIO L CH IN OUT
TP3009
D3007 04AZ4.7ZTPA7 (4.7V)
D3008 04AZ4.7ZTPA7 (4.7V)
TP4102
J4101
T4101 EIQ7QF0
TP3001
C3071 470/6.3V
⚠ R3073 100 1/4W
D3005 04AZ9.1ZTPA7 (9.1V)
Q3010 (BUFFER)
D3006 04AZ13ZTPA7 (13V)
Q3003 (SWITCHING VIDEO EE-OFF)
R3025 20KB
EE LEVEL
L3012 47
MAIN EMPHA
CLAMP
1/2H SHIFT
LPF
FM DEMODU
DOUBLE LIMITER
ENV DET
DOC DET
SIDE LOCK
PIC CONTROL
NOISE CANCELLER 1
NOISE CANCELLER 2
NL EMPHA DETAIL EMPHA
YNR
ON OFF
Y/C MIX
NL DE-EMPHA
REC-ON
PB REC
CLAMP
CLAMP
LPF
SYNC SEPA
PULSE GENE
AGC DET
AGC
TUNER
LINE
AMP
ART V/H SYNC MIX
PB-ON
PB LP/SLP
PB SP
REC SP/PB
REC LP/SLP
BURST DOWN
BPF 3.58MHz
1/2H KILLER
APC DET
90 PHASE SHIFTER
COLOR KILLER DET
CHROMA ACC DET
CHROMA ACC
LPF 630KHz
BURST UP
MAIN CONV
COLOR KILLER
ACC DET
ACC
BPF 630KHz
REC-ON
1/40
REC AFC DET
VXO/XO
LPF
DL3001 VLDS0049
COMB FILTER IN OUT GND
TP3002
TP3303
TP3304
L3302 100
IC3301 LC7472NM8790 (CHARACTER GENERATOR)
VDD1 RESET GND SYN VDD1 VIDEO GND VIDEO
GND XTAL 7.16MHz CSYN OSC OSC SIGNAL LINE(H) OSD-CS(L) SERIAL CLOCK 0 SERIAL DATA 0 VDD2
IC4001 LA7285M (AUDIO REC/PB PROCESS)
REC/EE MUTE(H) AUDIO EE(H) SP/LP/SLP RIPPLE FILTER
WF17 WF18 WF19 WF20 WF21 WF22 WF23 WF24 WF28
TP3007
TP3305


1/2H KILLER
APC DET
90° PHASE SHIFTER
COLOR KILLER DET
SIDE LOCK
REC-ON
REC AFC DET
1/40
LPF
CHROMA ACC DET
CHROMA ACC
LPF 630KHz
BURST UP
MAIN CONV
COLOR KILLER
ACC DET
ACC
BPF 630KHz
BPF 3.58MHz
BURST DOWN
REC LP/SLP
REC SP /PB
VXO/XO
X3001 VSXS0179
WF17
WF24 TP3002
WF27 TP3010
TP3005
J3005
REC CHROMA LEVEL
Q3002 (BUFFER)
IC3221 MN3858S (CCD 1H DELAY)
VGG
DRIVE
907/2
S/H
AMP
GND
VDD
Q3201 (BUFFER)
LNC
IC3301 LC7472NMB790 (CHARACTER GENERATOR)
VDD1
RESET
GND
VIDEO
SYN
XTAL 7.16MHz
CSYN
OSC
SIGNAL LINE(H)
OSD-CS(L)
SERIAL CLOCK 0
SERIAL DATA 0
VDD2
TP3304
L3301 18
(LC OSC)
Q3009 2SB710(Q) (SWITCHING PB-ON)
IC4001 LA7285M (AUDIO REC/PB PROCESS)
REC /EE
MUTE (H)
AUDIO EE(H)
SP /LP /SLP
RIPPLE FILTER
WF28
TP3305
UHF/VHF TUNER/TV DEMODULATOR UNIT VEQS0559
UNSW +5V (VIDEO)
AUDIO
VIDEO
SW +12V
DTS INT/BUSY (L)
UNSW +5V (VIDEO)
SERIAL DATA 0
AUDIO DEFEAT (H)
SIGNAL (L)
SERIAL CLOCK 0
SW +12V
UNSW +30V
D7007 04AZ6.2ZTPA7 (6.2V)
R7010 10KB
INPUT LEVEL
D7004 04AZ4.7Z (4.7V)
D
E
F
G
H
I
J
K
L

VIDEO SIGNAL PROCESS SECTION
NOTE:REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE:C.B.A....R2. REF. NO. 3000 SERIES.
SCHEMATIC DIAGRAM...R3002
(R3002 IS ABBREVIATED TO R2.)

AUDIO SECTION
NOTE:REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE:C.B.A....R2. REF. NO. 4000 SERIES.
SCHEMATIC DIAGRAM...R4002
(R4002 IS ABBREVIATED TO R2.)

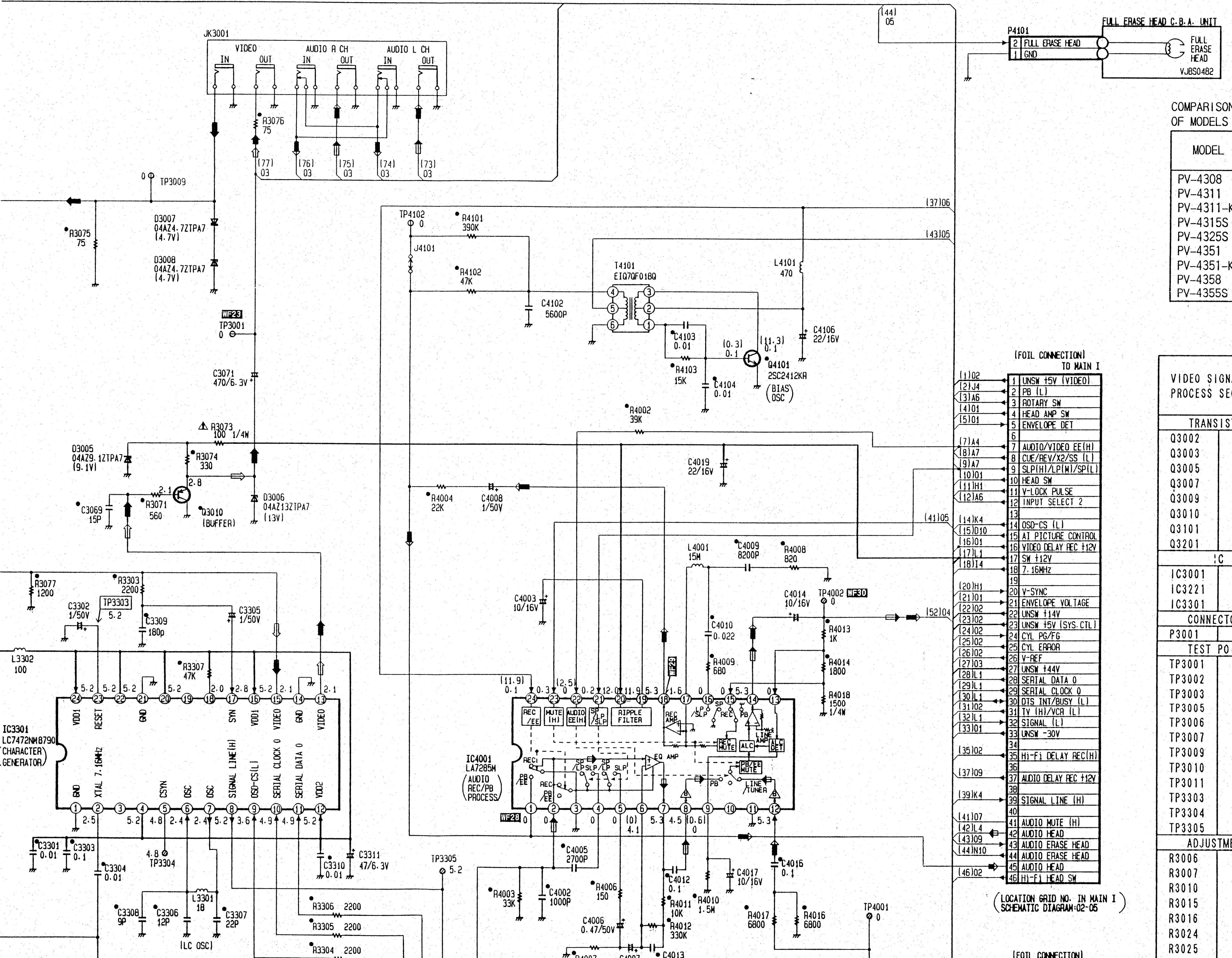
DEMODULATOR SECTION
NOTE:REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE:C.B.A....R2. REF. NO. 7000 SERIES.
SCHEMATIC DIAGRAM...R 7002
(R 7002 IS ABBREVIATED TO R2.)

UNLESS OTHERWISE SPECIFIED:
PNP TRANSISTORS IS 2SB709(Q).
NPN TRANSISTORS IS 2SD601(Q).
DIODES IS WG713A AND
WATTAGE OF RESISTORS IS 1/8W.

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE
SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS,
USE ONLY THE SPECIFIED PARTS.

NOTE: THE MARK "•" INDICATES LEADLESS
(CHIP) COMPONENTS.

TEST POINT INFORMATION
⦶ : TEST POINT WITH A JUMPER WIRE ACROSS A HOLE IN THE P.C.B.
▭→ : TEST POINT WITH A COMPONENT LEAD ON THE FOIL SIDE.
⊘ : TEST POINT WITH NO TEST PIN.
● : TEST POINT WITH A TEST PIN.

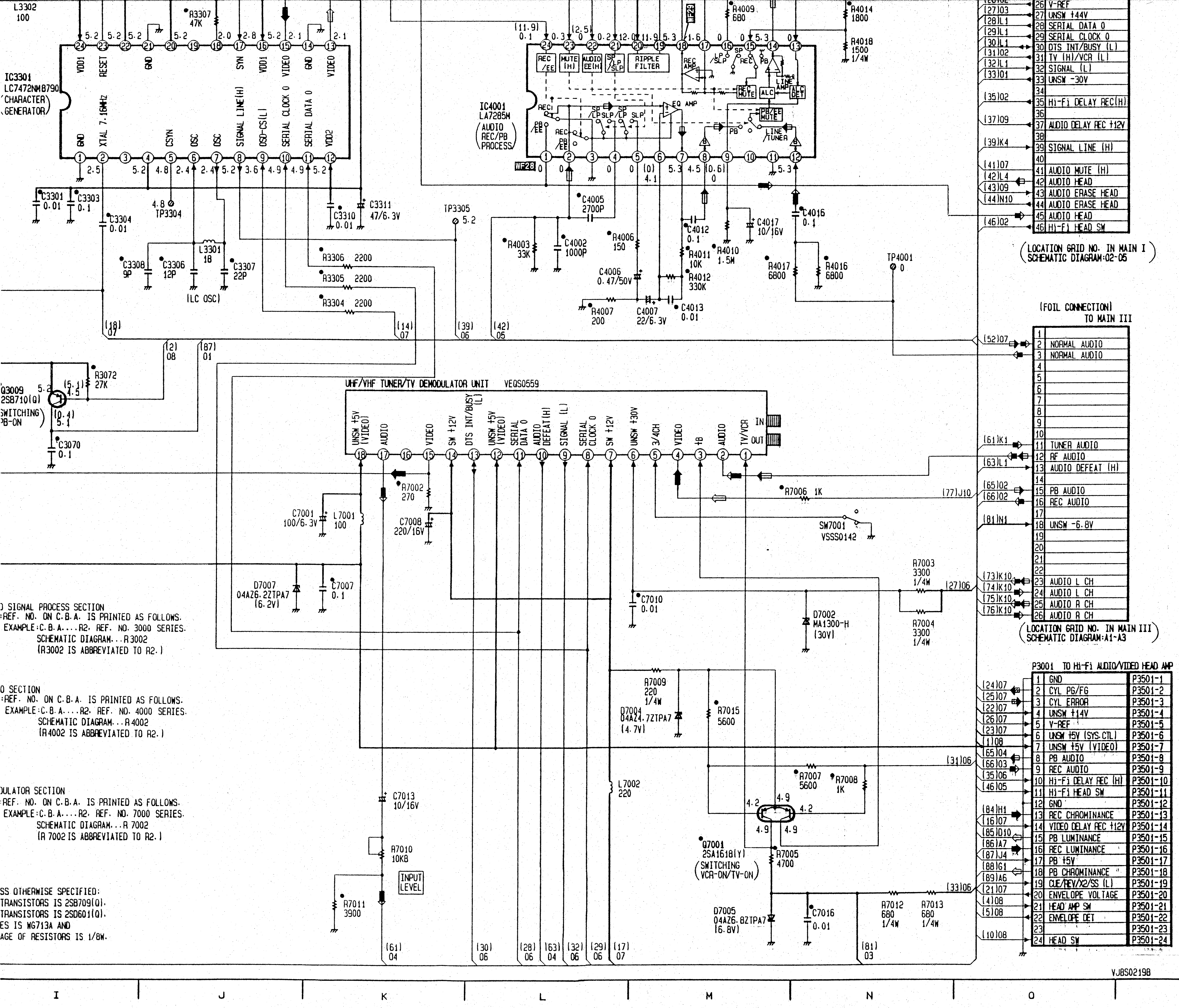

JK3001
VIDEO
AUDIO R CH
AUDIO L CH
IN
OUT
R3076 75
(77) 03
(76) 03
(75) 03
(74) 03
(73) 03
TP3009
D3007 04AZ4.7ZTPA7 (4.7V)
D3008 04AZ4.7ZTPA7 (4.7V)
R3075 75
WF23
TP3001
C3071 470/6.3V
R3073 100 1/4W
D3005 04AZ9.1ZTPA7 (9.1V)
R3074 330
C3069 15P
R3071 560
Q3010 (BUFFER)
D3006 04AZ13ZTPA7 (13V)
R3077 1200
R3303 2200
C3302 1/50V
TP3303 5.2
C3309 180p
C3305 1/50V
L3302 100
R3307 47K
IC3301 LC7472NM8790 (CHARACTER GENERATOR)
VDD1
RESET
GND
SYN
VIDEO
VDD2
XTAL 7.16MHz
CSYN
OSC
SIGNAL LINE(H)
OSD-CS(L)
SERIAL CLOCK 0
SERIAL DATA 0
C3301 0.01
C3303 0.1
C3304 0.01
TP3304
C3308 9P
C3306 12P
L3301 18
C3307 22P
(LC OSC)
C3310 0.01
C3311 47/6.3V
R3306 2200
R3305 2200
R3304 2200
TP3305 5.2
(44) 05
P4101
FULL ERASE HEAD C.B.A. UNIT
FULL ERASE HEAD
GND
VJBS0482
TP4102
R4101 390K
J4101
R4102 47K
C4102 5600P
T4101 EIQ7QF018Q
L4101 470
C4106 22/16V
C4103 0.01
R4103 15K
C4104 0.01
Q4101 2SC2412KR
(BIAS OSC)
(37) 06
(43) 05
(41) 05
(52) 04
R4002 39K
C4019 22/16V
R4004 22K
C4008 1/50V
L4001 15M
C4009 8200P
R4008 820
C4003 10/16V
C4014 10/16V
TP4002 WF30
C4010 0.022
R4013 1K
R4009 680
R4014 1800
R4018 1500 1/4W
WF29
IC4001 LA7285M (AUDIO REC/PB PROCESS)
REC/EE
MUTE (H)
AUDIO EE(H)
SP/SLP
RIPPLE FILTER
REC AMP
EQ AMP
REC MUTE
ALC
LINE AMP
ALC DET
PB/EE MUTE
LINE/TUNER
WF28
C4005 2700P
R4003 33K
C4002 1000P
R4006 150
C4006 0.47/50V
C4012 0.1
R4011 10K
R4010 1.5M
R4012 330K
C4017 10/16V
C4016 0.1
R4017 6800
R4016 6800
TP4001
R4007
C4007
C4013
(FOIL CONNECTION) TO MAIN I
(1) 02
(2) J4
(3) A6
(4) 01
(5) 01
(7) A4
(8) A7
(9) A7
(10) 01
(11) H1
(12) A6
(14) K4
(15) D10
(16) 01
(17) L1
(18) I4
(20) H1
(21) 01
(22) 02
(23) 02
(24) 02
(25) 02
(26) 02
(27) 03
(28) L1
(29) L1
(30) L1
(31) 02
(32) L1
(33) 01
(35) 02
(37) 09
(39) K4
(41) 07
(42) L4
(43) 09
(44) N10
(46) 02
1 UNSW +5V (VIDEO)
2 PB (L)
3 ROTARY SW
4 HEAD AMP SW
5 ENVELOPE DET
6
7 AUDIO/VIDEO EE(H)
8 CUE/REV/X2/SS (L)
9 SLP(H)/LP(M)/SP(L)
10 HEAD SW
11 V-LOCK PULSE
12 INPUT SELECT 2
13
14 OSD-CS (L)
15 AI PICTURE CONTROL
16 VIDEO DELAY REC +12V
17 SW +12V
18 7.16MHz
19
20 V-SYNC
21 ENVELOPE VOLTAGE
22 UNSW +14V
23 UNSW +5V (SYS.CTL)
24 CYL PG/FG
25 CYL ERROR
26 V-REF
27 UNSW +44V
28 SERIAL DATA 0
29 SERIAL CLOCK 0
30 DTS INT/BUSY (L)
31 TV (H)/VCR (L)
32 SIGNAL (L)
33 UNSW -30V
34
35 Hi-Fi DELAY REC(H)
36
37 AUDIO DELAY REC +12V
38
39 SIGNAL LINE (H)
40
41 AUDIO MUTE (H)
42 AUDIO HEAD
43 AUDIO ERASE HEAD
44 AUDIO ERASE HEAD
45 AUDIO HEAD
46 Hi-Fi HEAD SW
(LOCATION GRID NO. IN MAIN I SCHEMATIC DIAGRAM:02-05)
(FOIL CONNECTION)

COMPARISON CHART
OF MODELS & MARKS

MODEL	MARK
PV-4308	A
PV-4311	B
PV-4311-K	C
PV-4315S	D
PV-4325S	E
PV-4351	F
PV-4351-K	G
PV-4358	H
PV-4355S	I

VIDEO SIGNAL
PROCESS SECTION

TRANSISTOR	
Q3002	G-4
Q3003	F-8
Q3005	E-10
Q3007	G-10
Q3009	I-4
Q3010	J-7
Q3101	E-9
Q3201	D-1
IC	
IC3001	C-8
IC3221	F-2
IC3301	I-6
CONNECTOR	
P3001	0-2
TEST POINT	
TP3001	J-9
TP3002	G-5
TP3003	C-9
TP3005	G-5
TP3006	A-7
TP3007	D-9
TP3009	J-10
TP3010	H-5
TP3011	A-6
TP3303	I-7
TP3304	J-5
TP3305	K-5
ADJUSTMENT	
R3006	B-7
R3007	B-8
R3010	B-9
R3015	G-4
R3016	B-8
R3024	B-7
R3025	G-8


L3302
100
R3307
47K
IC3301
LC7472NM8790
(CHARACTER GENERATOR)
VDD1
RESET
GND
SYN
VIDEO
XTAL 7.16MHz
CSYN
OSC
SIGNAL LINE (H)
OSD-CS (L)
SERIAL CLOCK 0
SERIAL DATA 0
VDD2
C3301
0.01
C3303
0.1
C3304
0.01
TP3304
C3308
9P
C3306
12P
L3301
18
C3307
22P
(LC OSC)
C3310
0.01
C3311
47/6.3V
R3306 2200
R3305 2200
R3304 2200
TP3305
IC4001
LA7285M
(AUDIO REC/PB PROCESS)
REC/EE
MUTE (H)
AUDIO EE (H)
SP LP SLP
RIPPLE FILTER
REC AMP
EQ AMP
REC MUTE
ALC
LINE AMP
ALC DET
PB/EE MUTE
LINE/TUNER
WF28
WF29
R4009
680
R4014
1800
R4018
1500
1/4W
C4005
2700P
R4003
33K
C4002
1000P
R4006
150
C4006
0.47/50V
R4007
200
C4007
22/6.3V
C4013
0.01
C4012
0.1
R4011
10K
R4010
1.5M
R4012
330K
C4017
10/16V
C4016
0.1
R4017
6800
R4016
6800
TP4001
26 V-REF
27 UNSW +44V
28 SERIAL DATA 0
29 SERIAL CLOCK 0
30 DTS INT/BUSY (L)
31 TV (H)/VCR (L)
32 SIGNAL (L)
33 UNSW -30V
35 Hi-Fi DELAY REC (H)
37 AUDIO DELAY REC +12V
39 SIGNAL LINE (H)
41 AUDIO MUTE (H)
42 AUDIO HEAD
43 AUDIO ERASE HEAD
44 AUDIO ERASE HEAD
45 AUDIO HEAD
46 Hi-Fi HEAD SW
(LOCATION GRID NO. IN MAIN I SCHEMATIC DIAGRAM:02-05)
(FOIL CONNECTION) TO MAIN III
2 NORMAL AUDIO
3 NORMAL AUDIO
11 TUNER AUDIO
12 RF AUDIO
13 AUDIO DEFEAT (H)
15 PB AUDIO
16 REC AUDIO
18 UNSW -6.8V
23 AUDIO L CH
24 AUDIO L CH
25 AUDIO R CH
26 AUDIO R CH
(LOCATION GRID NO. IN MAIN III SCHEMATIC DIAGRAM:A1-A3)
Q3009
2SB710(Q)
(SWITCHING PB-ON)
R3072
27K
C3070
0.1
UHF/VHF TUNER/TV DEMODULATOR UNIT VEQS0559
UNSW +5V (VIDEO)
AUDIO
VIDEO
SW +12V
DTS INT/BUSY (L)
UNSW +5V (VIDEO)
SERIAL DATA 0
AUDIO DEFEAT (H)
SIGNAL (L)
SERIAL CLOCK 0
SW +12V
UNSW +30V
3/4CH
VIDEO
+B
AUDIO
TV/VCR
IN
OUT
R7002
270
C7001
100/6.3V
L7001
100
C7008
220/16V
R7006 1K
SW7001
VSS0142
D7007
04AZ6.2ZTPA7
(6.2V)
C7007
0.1
C7010
0.01
D7002
MA1300-H
(30V)
R7003
3300
1/4W
R7004
3300
1/4W
R7009
220
1/4W
D7004
04AZ4.7ZTPA7
(4.7V)
R7015
5600
L7002
220
C7013
10/16V
R7010
10KB
INPUT LEVEL
R7011
3900
R7007
5600
R7008
1K
Q7001
2SA1618(Y)
(SWITCHING VCR-ON/TV-ON)
R7005
4700
D7005
04AZ6.8ZTPA7
(6.8V)
C7016
0.01
R7012
680
1/4W
R7013
680
1/4W
P3001 TO Hi-Fi AUDIO/VIDEO HEAD AMP
1 GND
2 CYL PG/FG
3 CYL ERROR
4 UNSW +14V
5 V-REF
6 UNSW +5V (SYS.CTL)
7 UNSW +5V (VIDEO)
8 PB AUDIO
9 REC AUDIO
10 Hi-Fi DELAY REC (H)
11 Hi-Fi HEAD SW
12 GND
13 REC CHROMINANCE
14 VIDEO DELAY REC +12V
15 PB LUMINANCE
16 REC LUMINANCE
17 PB +5V
18 PB CHROMINANCE
19 CUE/REV/X2/SS (L)
20 ENVELOPE VOLTAGE
21 HEAD AMP SW
22 ENVELOPE DET
24 HEAD SW
P3501-1 … P3501-24
VJBS0219B
I
J
K
L
M
N
O
P

) SIGNAL PROCESS SECTION
:REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE:C.B.A....R2, REF. NO. 3000 SERIES.
SCHEMATIC DIAGRAM...R3002
(R3002 IS ABBREVIATED TO R2.)

0 SECTION
:REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE:C.B.A....R2, REF. NO. 4000 SERIES.
SCHEMATIC DIAGRAM...R4002
(R4002 IS ABBREVIATED TO R2.)

)ULATOR SECTION
:REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE:C.B.A....R2, REF. NO. 7000 SERIES.
SCHEMATIC DIAGRAM...R 7002
(R 7002 IS ABBREVIATED TO R2.)

SS OTHERWISE SPECIFIED:
TRANSISTORS IS 2SB709(Q).
TRANSISTORS IS 2SD601(Q).
ES IS WG713A AND
AGE OF RESISTORS IS 1/8W.

TP3001	J-9
TP3002	G-5
TP3003	C-9
TP3005	G-5
TP3006	A-7
TP3007	D-9
TP3009	J-10
TP3010	H-5
TP3011	A-6
TP3303	I-7
TP3304	J-5
TP3305	K-5
ADJUSTMENT	
R3006	B-7
R3007	B-8
R3010	B-9
R3015	G-4
R3016	B-8
R3024	B-7
R3025	G-8
R3203	D-1

AUDIO SECTION

TRANSISTOR	
Q4101	N-8
IC	
IC4001	K-6
CONNECTOR	
P4101	O-10
TEST POINT	
TP4001	N-5
TP4002	N-7
TP4102	K-9

DEMODULATOR SECTION

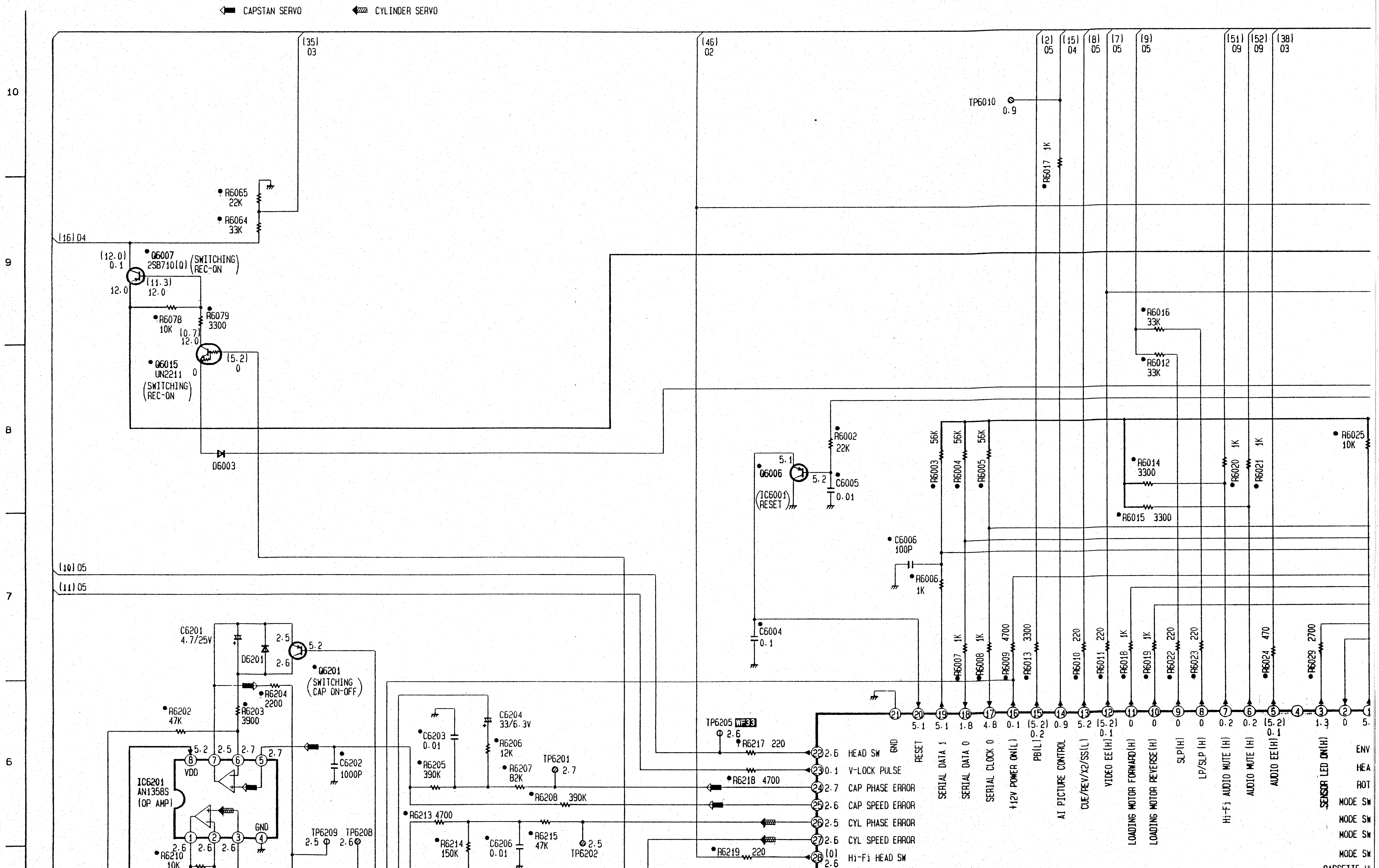
TRANSISTOR	
Q7001	M-1
ADJUSTMENT	
R7010	K-1

MAIN I (POWER SUPPLY/SYSTEM CONTROL/SERVO) SCHEMATIC DIA

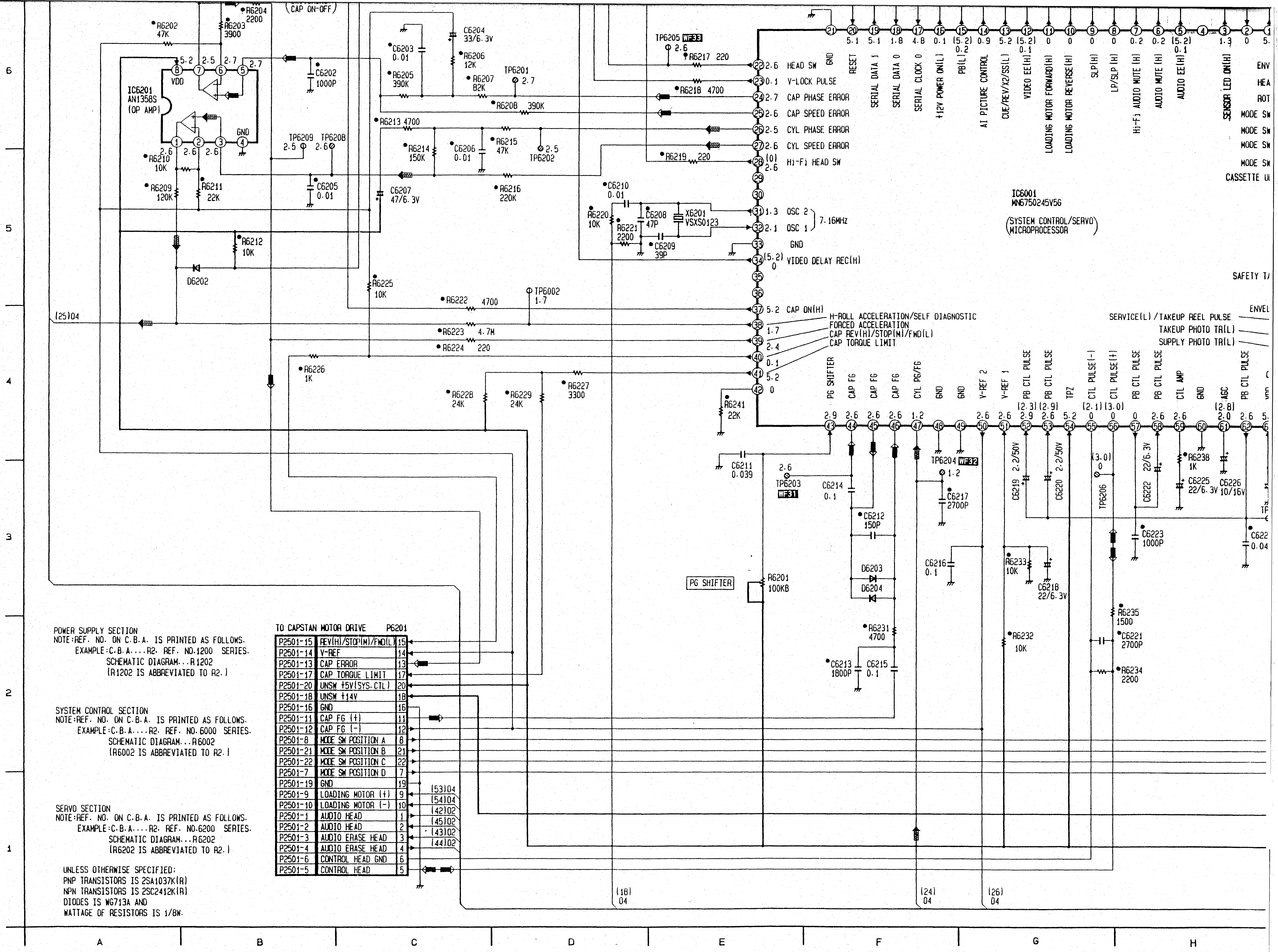
NOTE: HOW TO READ CONVERGED LINES
(100)B4
↑ ↑—LOCATION GRID NUMBER OF THE OTHER END OF THE LINE
└—LINE NUMBER

NOTE:
1. DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.
2. TO MAINTAIN ORIGINAL FUNCTION AND RELIABILITY OF REPAIRED UNITS, USE ONLY ORIGINAL REPLACEMENT PARTS WHICH ARE LISTED WITH THEIR PART NUMBERS IN THE PARTS LIST SECTION OF THE SERVICE MANUAL.

IMPORTAN
COMPONEN
SPECIAL
WHEN REP
USE ONLY



CAPSTAN SERVO
CYLINDER SERVO
10
9
8
7
6
(35) 03
(46) 02
(2) 05
(15) 04
(8) 05
(7) 05
(9) 05
(51) 09
(52) 09
(38) 03
(16) 04
(10) 05
(11) 05
TP6010 0.9
R6017 1K
R6065 22K
R6064 33K
Q6007 2SB710(Q) (SWITCHING REC-ON)
(12.0) 0.1
12.0
(11.3) 12.0
R6078 10K
R6079 3300
(0.7) 12.0
Q6015 UN2211 (SWITCHING REC-ON)
(5.2) 0
D6003
R6016 33K
R6012 33K
R6002 22K
Q6006 (IC6001 RESET)
5.1
5.2
C6005 0.01
R6003 56K
R6004 56K
R6005 56K
R6014 3300
R6015 3300
R6020 1K
R6021 1K
R6025 10K
C6006 100P
R6006 1K
C6004 0.1
C6201 4.7/25V
D6201
2.5
2.6
5.2
Q6201 (SWITCHING CAP ON-OFF)
R6204 2200
R6203 3900
R6202 47K
IC6201 AN1358S (OP AMP)
VDD
GND
C6202 1000P
C6203 0.01
C6204 33/6.3V
R6205 390K
R6206 12K
R6207 82K
TP6201 2.7
R6208 390K
R6213 4700
R6214 150K
C6206 0.01
R6215 47K
TP6202 2.5
TP6209 2.5
TP6208 2.6
R6210 10K
TP6205 WF33 2.6
R6217 220
R6218 4700
R6219 220
R6007 1K
R6008 1K
R6009 4700
R6013 3300
R6010 220
R6011 220
R6018 1K
R6019 1K
R6022 220
R6023 220
R6024 470
R6029 2700
5.1 5.1 1.8 4.8 0.1 (5.2) 0.2 0.9 5.2 (5.2) 0.1 0 0 0 0 0.2 0.2 (5.2) 0.1 1.3 0 5.
GND
RESET
SERIAL DATA 1
SERIAL DATA 0
SERIAL CLOCK 0
+12V POWER ON(L)
PB(L)
AI PICTURE CONTROL
CUE/REV/X2/SS(L)
VIDEO EE(H)
LOADING MOTOR FORWARD(H)
LOADING MOTOR REVERSE(H)
SLP(H)
LP/SLP (H)
Hi-Fi AUDIO MUTE (H)
AUDIO MUTE (H)
AUDIO EE(H)
SENSOR LED ON(H)
22 2.6 HEAD SW
23 0.1 V-LOCK PULSE
24 2.7 CAP PHASE ERROR
25 2.6 CAP SPEED ERROR
26 2.5 CYL PHASE ERROR
27 2.6 CYL SPEED ERROR
28 (0) 2.6 Hi-Fi HEAD SW
ENV
HEA
ROT
MODE SW
MODE SW
MODE SW
MODE SW


IC6201
AN1358S
(OP AMP)
VDD
GND
CAP ON-OFF
R6202 47K
R6203 3900
R6204 2200
R6205 390K
R6206 12K
R6207 82K
R6208 390K
R6209 120K
R6210 10K
R6211 22K
R6212 10K
R6213 4700
R6214 150K
R6215 47K
R6216 220K
R6217 220
R6218 4700
R6219 220
R6220 10K
R6221 2200
R6222 4700
R6223 4.7M
R6224 220
R6225 10K
R6226 1K
R6227 3300
R6228 24K
R6229 24K
R6241 22K
C6202 1000P
C6203 0.01
C6204 33/6.3V
C6205 0.01
C6206 0.01
C6207 47/6.3V
C6208 47P
C6209 39P
C6210 0.01
X6201 VSXS0123
D6202
TP6201
TP6202
TP6205 WF33
TP6208
TP6209
TP6002
(25)04
IC6001
MN6750245V56
(SYSTEM CONTROL/SERVO MICROPROCESSOR)
HEAD SW
V-LOCK PULSE
CAP PHASE ERROR
CAP SPEED ERROR
CYL PHASE ERROR
CYL SPEED ERROR
Hi-Fi HEAD SW
OSC 2
OSC 1
7.16MHz
GND
VIDEO DELAY REC(H)
CAP ON(H)
H-ROLL ACCELERATION/SELF DIAGNOSTIC
FORCED ACCELERATION
CAP REV(H)/STOP(M)/FWD(L)
CAP TORQUE LIMIT
GND
RESET
SERIAL DATA 1
SERIAL DATA 0
SERIAL CLOCK 0
+12V POWER ON(L)
PB(L)
AI PICTURE CONTROL
CUE/REV/X2/SS(L)
VIDEO EE(H)
LOADING MOTOR FORWARD(H)
LOADING MOTOR REVERSE(H)
SLP(H)
LP/SLP (H)
Hi-Fi AUDIO MUTE (H)
AUDIO MUTE (H)
AUDIO EE(H)
SENSOR LED ON(H)
SAFETY T
SERVICE(L)/TAKEUP REEL PULSE
TAKEUP PHOTO TR(L)
SUPPLY PHOTO TR(L)
PG SHIFTER
CAP FG
CAP FG
CAP FG
CYL PG/FG
GND
GND
V-REF 2
V-REF 1
PB CTL PULSE
PB CTL PULSE
TPZ
CTL PULSE(-)
CTL PULSE(+)
PB CTL PULSE
PB CTL PULSE
CTL AMP
GND
AGC
PB CTL PULSE
C6211 0.039
TP6203 WF31
C6214 0.1
C6212 150P
D6203
D6204
R6231 4700
C6213 1800P
C6215 0.1
TP6204 WF32
C6217 2700P
C6216 0.1
PG SHIFTER
R6201 100KB
C6219 2.2/50V
C6220 2.2/50V
R6233 10K
C6218 22/6.3V
R6232 10K
TP6206
C6222 22/6.3V
C6223 1000P
R6235 1500
C6221 2700P
R6234 2200
R6238 1K
C6225 22/6.3V
C6226 10/16V
TO CAPSTAN MOTOR DRIVE P6201
P2501-15 REV(H)/STOP(M)/FWD(L) 15
P2501-14 V-REF 14
P2501-13 CAP ERROR 13
P2501-17 CAP TORQUE LIMIT 17
P2501-20 UNSW +5V(SYS.CTL) 20
P2501-18 UNSW +14V 18
P2501-16 GND 16
P2501-11 CAP FG (+) 11
P2501-12 CAP FG (-) 12
P2501-8 MODE SW POSITION A 8
P2501-21 MODE SW POSITION B 21
P2501-22 MODE SW POSITION C 22
P2501-7 MODE SW POSITION D 7
P2501-19 GND 19
P2501-9 LOADING MOTOR (+) 9
P2501-10 LOADING MOTOR (-) 10
P2501-1 AUDIO HEAD 1
P2501-2 AUDIO HEAD 2
P2501-3 AUDIO ERASE HEAD 3
P2501-4 AUDIO ERASE HEAD 4
P2501-6 CONTROL HEAD GND 6
P2501-5 CONTROL HEAD 5
(53)04
(54)04
(42)02
(45)02
(43)02
(44)02
(18) 04
(24) 04
(26) 04
A
B
C
D
E
F
G
H
6
5
4
3
2
1

POWER SUPPLY SECTION
NOTE:REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE:C.B.A....R2. REF. NO.1200 SERIES.
SCHEMATIC DIAGRAM...R1202
(R1202 IS ABBREVIATED TO R2.)

SYSTEM CONTROL SECTION
NOTE:REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE:C.B.A....R2. REF. NO.6000 SERIES.
SCHEMATIC DIAGRAM...R6002
(R6002 IS ABBREVIATED TO R2.)

SERVO SECTION
NOTE:REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE:C.B.A....R2. REF. NO.6200 SERIES.
SCHEMATIC DIAGRAM...R6202
(R6202 IS ABBREVIATED TO R2.)

UNLESS OTHERWISE SPECIFIED:
PNP TRANSISTORS IS 2SA1037K(R)
NPN TRANSISTORS IS 2SC2412K(R)
DIODES IS MG713A AND
WATTAGE OF RESISTORS IS 1/8W.

UPPLY/SYSTEM CONTROL/SERVO) SCHEMATIC DIAGRAM (I)

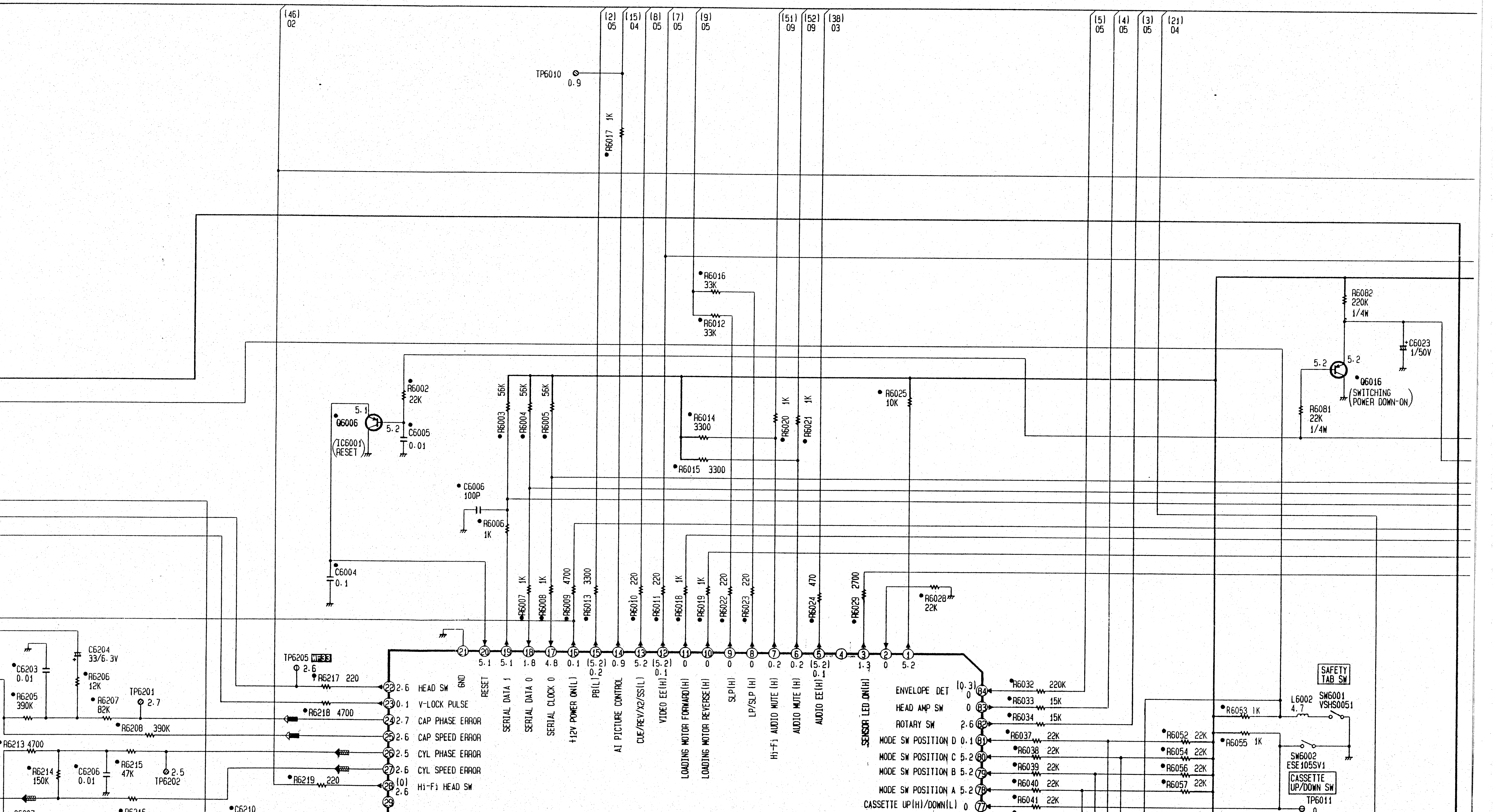
THE LINE

DER SERVO

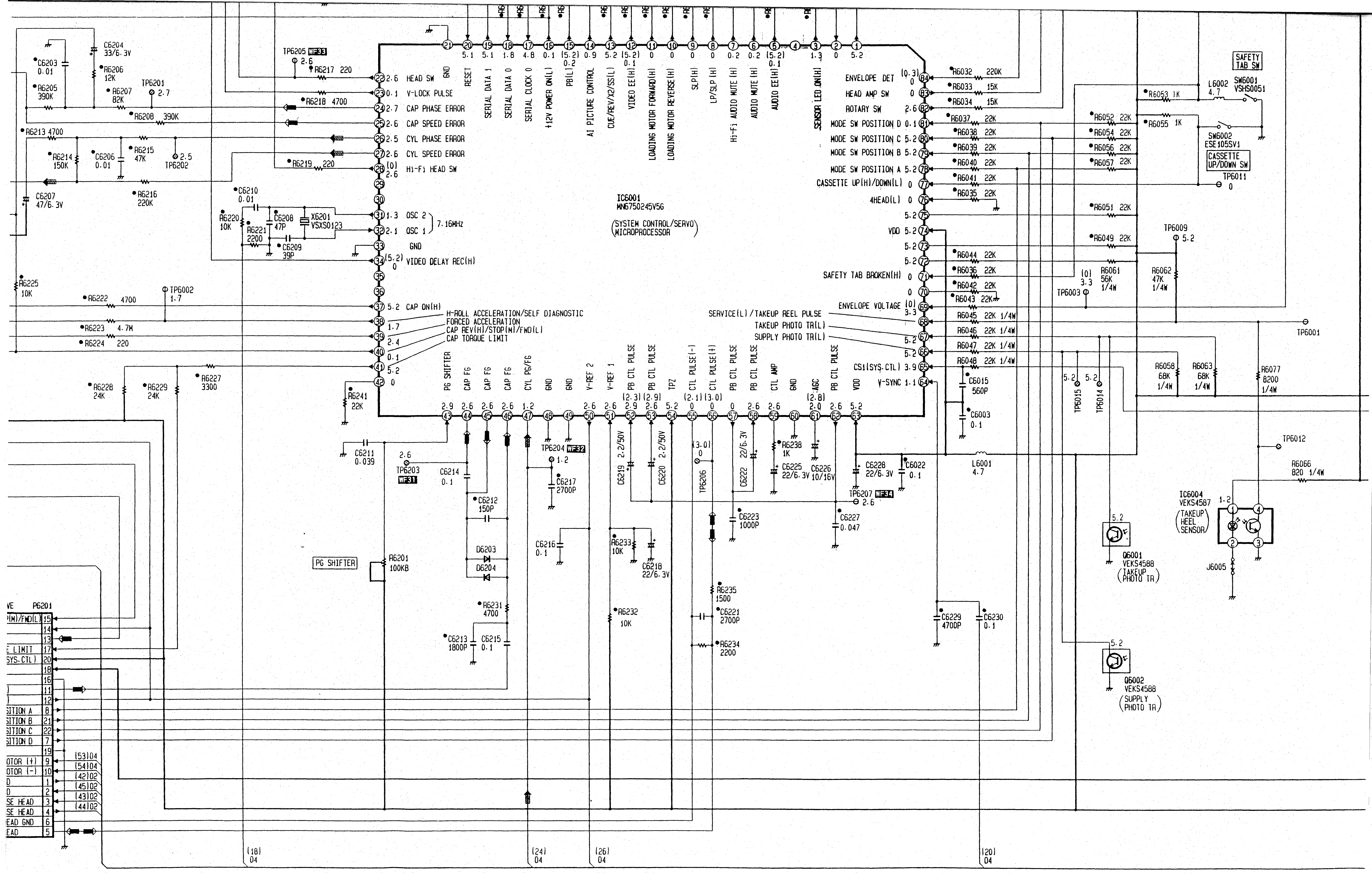
NOTE:
1. DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.
2. TO MAINTAIN ORIGINAL FUNCTION AND RELIABILITY OF REPAIRED UNITS, USE ONLY ORIGINAL REPLACEMENT PARTS WHICH ARE LISTED WITH THEIR PART NUMBERS IN THE PARTS LIST SECTION OF THE SERVICE MANUAL.

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

NOTE: THE MARK "•" INDICATES LEADLESS (CHIP) COMPONENTS.



(46) 02
(2) 05
(15) 04
(8) 05
(7) 05
(9) 05
(51) 09
(52) 09
(38) 03
(5) 05
(4) 05
(3) 05
(21) 04
TP6010 0.9
R6017 1K
R6016 33K
R6012 33K
R6082 220K 1/4W
C6023 1/50V
5.2
5.2
Q6016 (SWITCHING POWER DOWN-ON)
R6081 22K 1/4W
R6002 22K
5.1
Q6006
5.2
C6005 0.01
(IC6001 RESET)
R6003 56K
R6004 56K
R6005 56K
R6014 3300
R6015 3300
R6020 1K
R6021 1K
R6025 10K
C6006 100P
R6006 1K
C6004 0.1
R6007 1K
R6008 1K
R6009 4700
R6013 3300
R6010 220
R6011 220
R6018 1K
R6019 1K
R6022 220
R6023 220
R6024 470
R6029 2700
R6028 22K
C6204 33/6.3V
C6203 0.01
R6206 12K
R6205 390K
R6207 82K
TP6201 2.7
R6208 390K
R6213 4700
R6214 150K
C6206 0.01
R6215 47K
TP6202 2.5
TP6205 WF33 2.6
R6217 220
R6218 4700
R6219 220
C6210
21 GND
20 5.1 RESET
19 5.1 SERIAL DATA 1
18 1.8 SERIAL DATA 0
17 4.8 SERIAL CLOCK 0
16 0.1 +12V POWER ON(L)
15 (5.2) 0.2 PB(L)
14 0.9 AI PICTURE CONTROL
13 5.2 CUE/REV/X2/SS(L)
12 (5.2) 0.1 VIDEO EE(H)
11 0 LOADING MOTOR FORWARD(H)
10 0 LOADING MOTOR REVERSE(H)
9 0 SLP(H)
8 0 LP/SLP (H)
7 0.2 Hi-Fi AUDIO MUTE (H)
6 0.2 AUDIO MUTE (H)
5 (5.2) 0.1 AUDIO EE(H)
4
3 1.3 SENSOR LED ON(H)
2 0
1 5.2
22 2.6 HEAD SW
23 0.1 V-LOCK PULSE
24 2.7 CAP PHASE ERROR
25 2.6 CAP SPEED ERROR
26 2.5 CYL PHASE ERROR
27 2.6 CYL SPEED ERROR
28 (0) 2.6 Hi-Fi HEAD SW
29
ENVELOPE DET (0.3) 0 84
HEAD AMP SW 0 83
ROTARY SW 2.6 82
MODE SW POSITION D 0.1 81
MODE SW POSITION C 5.2 80
MODE SW POSITION B 5.2 79
MODE SW POSITION A 5.2 78
CASSETTE UP(H)/DOWN(L) 0 77
R6032 220K
R6033 15K
R6034 15K
R6037 22K
R6038 22K
R6039 22K
R6040 22K
R6041 22K
R6052 22K
R6054 22K
R6056 22K
R6057 22K
R6053 1K
R6055 1K
L6002 4.7
SW6001 VSHS0051
SAFETY TAB SW
SW6002 ESE105SV1
CASSETTE UP/DOWN SW
TP6011 0


IC6001
MN6750245V56
(SYSTEM CONTROL/SERVO MICROPROCESSOR)
RESET
SERIAL DATA 1
SERIAL DATA 0
SERIAL CLOCK 0
+12V POWER ON(L)
PB(L)
AI PICTURE CONTROL
CUE/REV/X2/SS(L)
VIDEO EE(H)
LOADING MOTOR FORWARD(H)
LOADING MOTOR REVERSE(H)
SLP(H)
LP/SLP (H)
Hi-Fi AUDIO MUTE (H)
AUDIO MUTE (H)
AUDIO EE(H)
SENSOR LED ON(H)
GND
HEAD SW
V-LOCK PULSE
CAP PHASE ERROR
CAP SPEED ERROR
CYL PHASE ERROR
CYL SPEED ERROR
Hi-Fi HEAD SW
OSC 2
OSC 1
7.16MHz
GND
VIDEO DELAY REC(H)
CAP ON(H)
H-ROLL ACCELERATION/SELF DIAGNOSTIC
FORCED ACCELERATION
CAP REV(H)/STOP(M)/FWD(L)
CAP TORQUE LIMIT
PG SHIFTER
CAP FG
CAP FG
CAP FG
CYL PG/FG
GND
GND
V-REF 2
V-REF 1
PB CTL PULSE
PB CTL PULSE
TPZ
CTL PULSE(-)
CTL PULSE(+)
PB CTL PULSE
PB CTL PULSE
CTL AMP
GND
AGC
PB CTL PULSE
VDD
V-SYNC
CS1(SYS.CTL)
SUPPLY PHOTO TR(L)
TAKEUP PHOTO TR(L)
SERVICE(L)/TAKEUP REEL PULSE
ENVELOPE VOLTAGE
SAFETY TAB BROKEN(H)
VDD
4HEAD(L)
CASSETTE UP(H)/DOWN(L)
MODE SW POSITION A
MODE SW POSITION B
MODE SW POSITION C
MODE SW POSITION D
ROTARY SW
HEAD AMP SW
ENVELOPE DET
SAFETY TAB SW
SW6001 VSHS0051
SW6002 ESE105SV1
CASSETTE UP/DOWN SW
L6002 4.7
L6001 4.7
IC6004 VEKS4587 (TAKEUP REEL SENSOR)
Q6001 VEKS4588 (TAKEUP PHOTO TR)
Q6002 VEKS4588 (SUPPLY PHOTO TR)
J6005
PG SHIFTER
R6201 100KB
X6201 VSXS0123
D6203
D6204
P6201
TP6205 WF33
TP6201
TP6202
TP6002
TP6203 WF31
TP6204 WF32
TP6206
TP6207 WF34
TP6003
TP6009
TP6011
TP6001
TP6012
TP6014
TP6015
C6204 33/6.3V
C6203 0.01
C6205 390K
R6206 12K
R6207 82K
R6208 390K
R6217 220
R6218 4700
R6213 4700
R6214 150K
C6206 0.01
R6215 47K
R6219 220
C6207 47/6.3V
R6216 220K
C6210 0.01
R6220 10K
R6221 2200
C6208 47P
C6209 39P
R6225 10K
R6222 4700
R6223 4.7M
R6224 220
R6227 3300
R6228 24K
R6229 24K
R6241 22K
C6211 0.039
C6214 0.1
C6212 150P
C6217 2700P
C6216 0.1
R6231 4700
C6213 1800P
C6215 0.1
C6219 2.2/50V
C6220 2.2/50V
C6222 22/6.3V
R6233 10K
C6218 22/6.3V
R6232 10K
R6238 1K
C6225 22/6.3V
C6226 10/16V
C6223 1000P
R6235 1500
C6221 2700P
R6234 2200
C6228 22/6.3V
C6022 0.1
C6227 0.047
C6229 4700P
C6230 0.1
C6015 560P
C6003 0.1
R6032 220K
R6033 15K
R6034 15K
R6037 22K
R6038 22K
R6039 22K
R6040 22K
R6041 22K
R6035 22K
R6044 22K
R6036 22K
R6042 22K
R6043 22K
R6045 22K 1/4W
R6046 22K 1/4W
R6047 22K 1/4W
R6048 22K 1/4W
R6053 1K
R6055 1K
R6052 22K
R6054 22K
R6056 22K
R6057 22K
R6051 22K
R6049 22K
R6061 56K 1/4W
R6062 47K 1/4W
R6058 68K 1/4W
R6063 68K 1/4W
R6077 8200 1/4W
R6066 820 1/4W
(18) 04
(24) 04
(26) 04
(20) 04
(53)04
(54)04
(42)02
(45)02
(43)02
(44)02
C
D
E
F
G
H
I
J
K

;RAM (I)

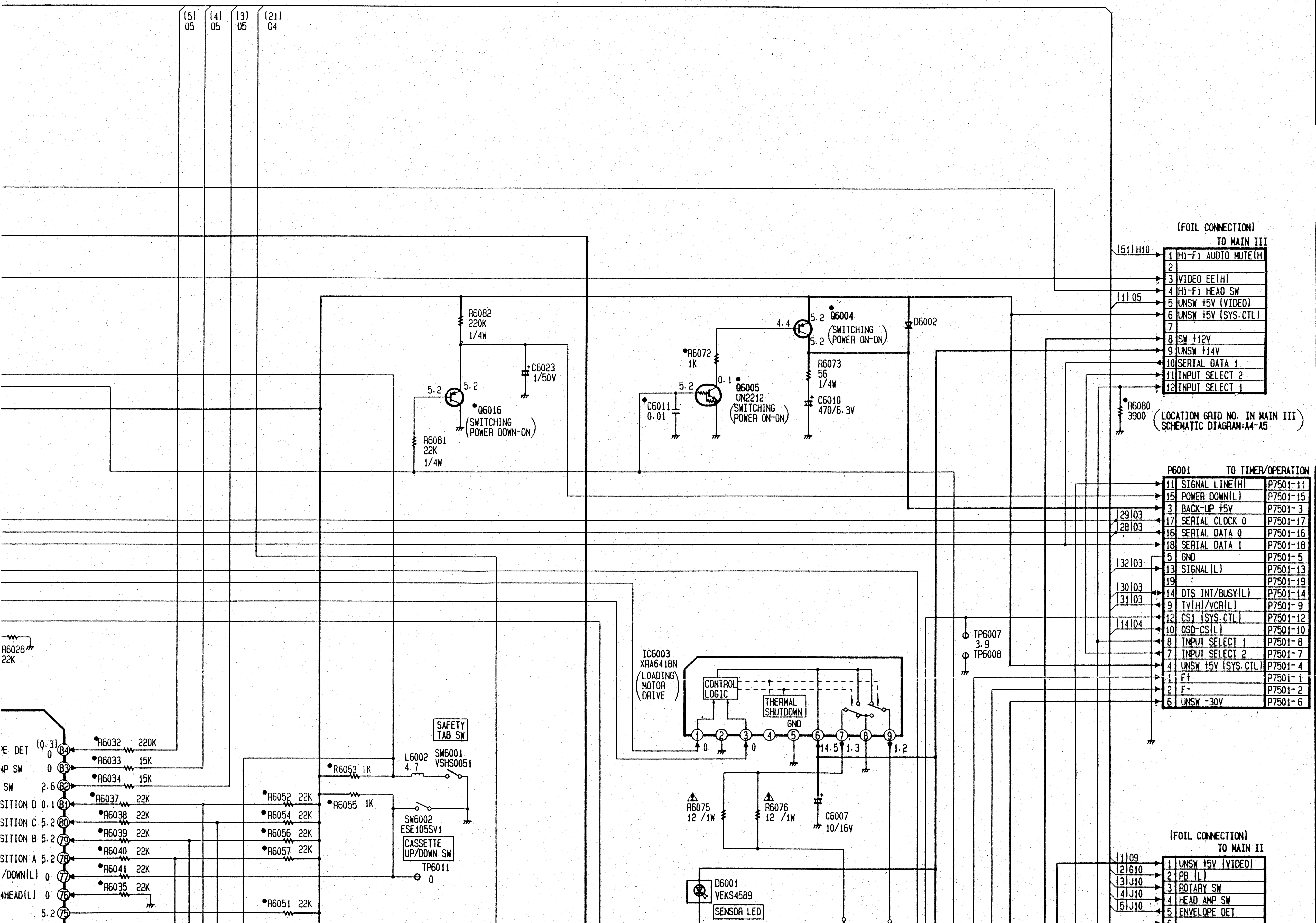
SAFETY NOTICE:
IDENTIFIED BY THE SIGN ⚠ HAVE
ARACTERISTICS IMPORTANT FOR SAFETY.
CING ANY OF THESE COMPONENTS,
HE SPECIFIED PARTS.

NOTE: THE MARK "•" INDICATES LEADLESS
(CHIP) COMPONENTS.

TEST POINT INFORMATION
⦶ : TEST POINT WITH A JUMPER WIRE ACROSS A HOLE IN THE P.C.B.
▭→ : TEST POINT WITH A COMPONENT LEAD ON THE FOIL SIDE.
⊘ : TEST POINT WITH NO TEST PIN.
● : TEST POINT WITH A TEST PIN.

COMPARISON CHART
OF MODELS & MARKS

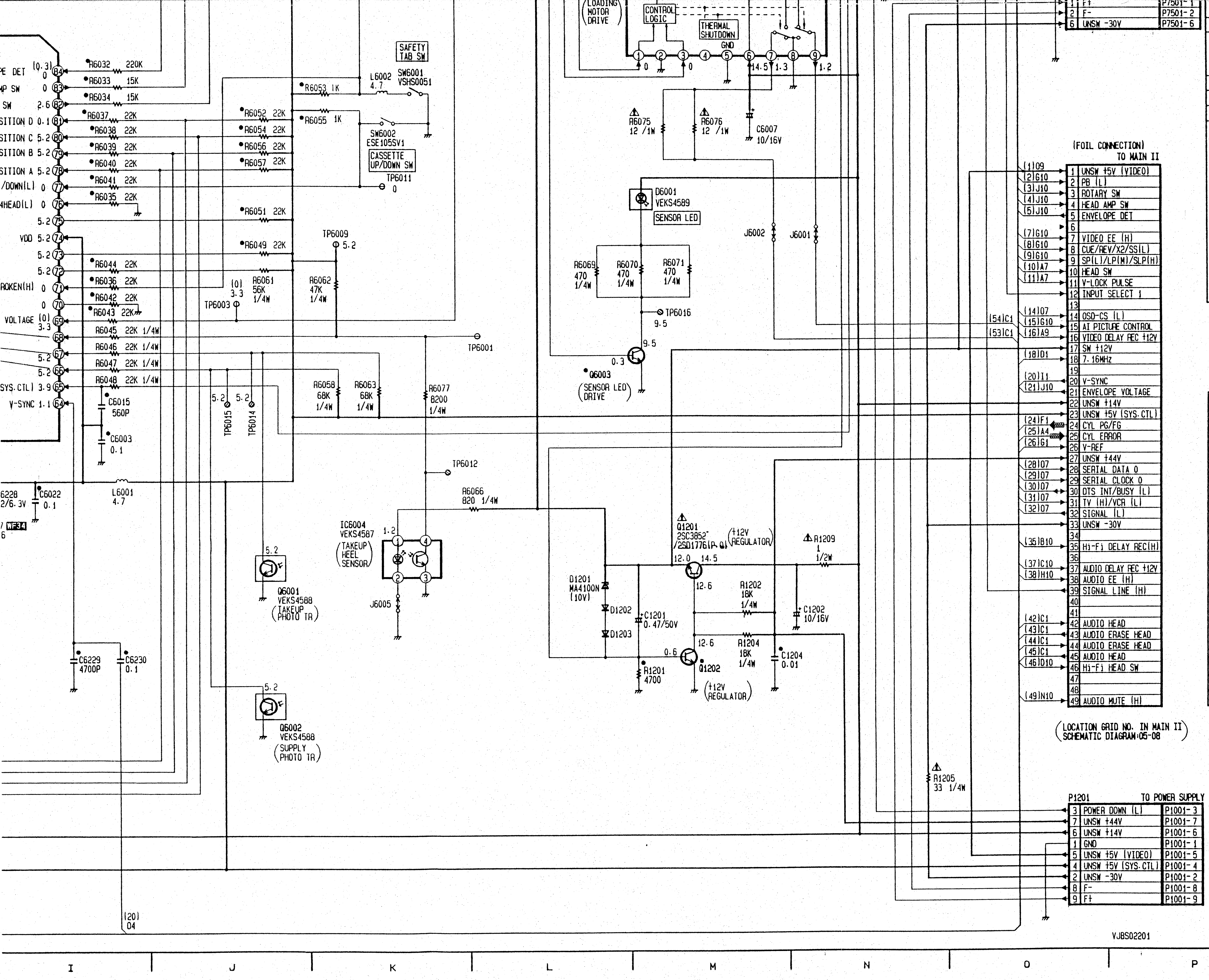
MODEL	MARK
PV-4308	A
PV-4311	B
PV-4311-K	C
PV-4315S	D
PV-4325S	E
PV-4351	F
PV-4351-K	G
PV-4358	H
PV-4355S	I



(5) 05
(4) 05
(3) 05
(21) 04
(FOIL CONNECTION)
TO MAIN III
(51) H10
(1) 05
1 Hi-Fi AUDIO MUTE(H)
2
3 VIDEO EE(H)
4 Hi-Fi HEAD SW
5 UNSW +5V (VIDEO)
6 UNSW +5V (SYS.CTL)
7
8 SW +12V
9 UNSW +14V
10 SERIAL DATA 1
11 INPUT SELECT 2
12 INPUT SELECT 1
R6080
3900
(LOCATION GRID NO. IN MAIN III SCHEMATIC DIAGRAM:A4-A5)
R6082
220K
1/4W
C6023
1/50V
5.2
5.2
Q6016
(SWITCHING POWER DOWN-ON)
R6081
22K
1/4W
R6072
1K
C6011
0.01
5.2
0.1
Q6005
UN2212
(SWITCHING POWER ON-ON)
4.4
5.2
Q6004
(SWITCHING POWER ON-ON)
5.2
R6073
56
1/4W
C6010
470/6.3V
D6002
P6001
TO TIMER/OPERATION
(29) 03
(28) 03
(32) 03
(30) 03
(31) 03
(14) 04
11 SIGNAL LINE(H) P7501-11
15 POWER DOWN(L) P7501-15
3 BACK-UP +5V P7501-3
17 SERIAL CLOCK 0 P7501-17
16 SERIAL DATA 0 P7501-16
18 SERIAL DATA 1 P7501-18
5 GND P7501-5
13 SIGNAL(L) P7501-13
19 P7501-19
14 DTS INT/BUSY(L) P7501-14
9 TV(H)/VCR(L) P7501-9
12 CS1 (SYS.CTL) P7501-12
10 OSD-CS(L) P7501-10
8 INPUT SELECT 1 P7501-8
7 INPUT SELECT 2 P7501-7
4 UNSW +5V (SYS.CTL) P7501-4
1 F+ P7501-1
2 F- P7501-2
6 UNSW -30V P7501-6
TP6007
3.9
TP6008
R6028
22K
IC6003
XRA6418N
(LOADING MOTOR DRIVE)
CONTROL LOGIC
THERMAL SHUTDOWN
GND
1 2 3 4 5 6 7 8 9
0
0
14.5
1.3
1.2
R6075
12 /1W
R6076
12 /1W
C6007
10/16V
D6001
VEKS4589
SENSOR LED
SAFETY TAB SW
L6002
4.7
SW6001
VSHS0051
SW6002
ESE105SV1
CASSETTE UP/DOWN SW
TP6011
0
PE DET (0.3) 0 84
MP SW 0 83
SW 2.6 82
SITION D 0.1 81
SITION C 5.2 80
SITION B 5.2 79
SITION A 5.2 78
/DOWN(L) 0 77
4HEAD(L) 0 76
5.2 75
R6032 220K
R6033 15K
R6034 15K
R6037 22K
R6038 22K
R6039 22K
R6040 22K
R6041 22K
R6035 22K
R6053 1K
R6055 1K
R6052 22K
R6054 22K
R6056 22K
R6057 22K
R6051 22K
(FOIL CONNECTION)
TO MAIN II
(1) 09
(2) G10
(3) J10
(4) J10
(5) J10
1 UNSW +5V (VIDEO)
2 PB (L)
3 ROTARY SW
4 HEAD AMP SW
5 ENVELOPE DET

POWER SUPPLY SECTION	
TRANSISTOR	
Q1201	M-3
Q1202	M-2
CONNECTOR	
P1201	O-1

SYSTEM CONTROL SECTION	
TRANSISTOR	
Q6001	J-3
Q6002	J-2
Q6003	L-4
Q6004	M-9
Q6005	M-8
Q6006	E-8
Q6007	A-9
Q6015	A-8
Q6016	K-8
IC	
IC6001	G-5
IC6003	L-7
IC6004	K-3
CONNECTOR	
P6001	O-8
TEST POINT	
TP6001	L-4
TP6002	D-4
TP6003	J-5
TP6007	N-7
TP6008	N-7
TP6009	K-5
TP6010	F-10


LOADING MOTOR DRIVE
CONTROL LOGIC
THERMAL SHUTDOWN
GND
SAFETY TAB SW
SW6001 VSHS0051
L6002 4.7
SW6002 ESE105SV1
CASSETTE UP/DOWN SW
TP6011
TP6009 5.2
TP6003
TP6001
TP6012
TP6015
TP6014
R6032 220K
R6033 15K
R6034 15K
R6037 22K
R6038 22K
R6039 22K
R6040 22K
R6041 22K
R6035 22K
R6044 22K
R6036 22K
R6042 22K
R6043 22K
R6045 22K 1/4W
R6046 22K 1/4W
R6047 22K 1/4W
R6048 22K 1/4W
R6053 1K
R6055 1K
R6052 22K
R6054 22K
R6056 22K
R6057 22K
R6051 22K
R6049 22K
R6061 56K 1/4W
R6062 47K 1/4W
R6058 68K 1/4W
R6063 68K 1/4W
R6077 8200 1/4W
R6066 820 1/4W
C6015 560P
C6003 0.1
C6022 0.1
L6001 4.7
C6229 4700P
C6230 0.1
Q6001 VEKS4588 (TAKEUP PHOTO TR)
Q6002 VEKS4588 (SUPPLY PHOTO TR)
IC6004 VEKS4587 (TAKEUP HEEL SENSOR)
J6005
R6075 12 /1W
R6076 12 /1W
C6007 10/16V
D6001 VEKS4589
SENSOR LED
J6002
J6001
R6069 470 1/4W
R6070 470 1/4W
R6071 470 1/4W
TP6016 9.5
Q6003 (SENSOR LED DRIVE)
Q1201 2SC3852 /2SD1776(P.Q) (+12V REGULATOR)
R1209 1 1/2W
D1201 MA4100N (10V)
D1202
D1203
C1201 0.47/50V
R1202 18K 1/4W
C1202 10/16V
R1204 18K 1/4W
C1204 0.01
R1201 4700
Q1202 (+12V REGULATOR)
R1205 33 1/4W
(FOIL CONNECTION) TO MAIN II
1 UNSW +5V (VIDEO)
2 PB (L)
3 ROTARY SW
4 HEAD AMP SW
5 ENVELOPE DET
7 VIDEO EE (H)
8 CUE/REV/X2/SS(L)
9 SP(L)/LP(H)/SLP(H)
10 HEAD SW
11 V-LOCK PULSE
12 INPUT SELECT 1
14 OSD-CS (L)
15 AI PICTURE CONTROL
16 VIDEO DELAY REC +12V
17 SW +12V
18 7.16MHz
20 V-SYNC
21 ENVELOPE VOLTAGE
22 UNSW +14V
23 UNSW +5V (SYS.CTL)
24 CYL PG/FG
25 CYL ERROR
26 V-REF
27 UNSW +44V
28 SERIAL DATA 0
29 SERIAL CLOCK 0
30 DTS INT/BUSY (L)
31 TV (H)/VCR (L)
32 SIGNAL (L)
33 UNSW -30V
35 Hi-Fi DELAY REC(H)
37 AUDIO DELAY REC +12V
38 AUDIO EE (H)
39 SIGNAL LINE (H)
42 AUDIO HEAD
43 AUDIO ERASE HEAD
44 AUDIO ERASE HEAD
45 AUDIO HEAD
46 Hi-Fi HEAD SW
49 AUDIO MUTE (H)
(LOCATION GRID NO. IN MAIN II SCHEMATIC DIAGRAM:05-08)
P1201 TO POWER SUPPLY
3 POWER DOWN (L) P1001-3
7 UNSW +44V P1001-7
6 UNSW +14V P1001-6
1 GND P1001-1
5 UNSW +5V (VIDEO) P1001-5
4 UNSW +5V (SYS.CTL) P1001-4
2 UNSW -30V P1001-2
8 F- P1001-8
9 F+ P1001-9
2 F- P7501-2
6 UNSW -30V P7501-6
VDD 5.2
V-SYNC 1.1
VJBS02201
I
J
K
L
M
N
O
P

Q6016	K-8
IC	
IC6001	G-5
IC6003	L-7
IC6004	K-3
CONNECTOR	
P6001	O-8
TEST POINT	
TP6001	L-4
TP6002	D-4
TP6003	J-5
TP6007	N-7
TP6008	N-7
TP6009	K-5
TP6010	F-10
TP6011	K-5
TP6012	K-4
TP6014	J-4
TP6015	J-4
TP6016	M-5

SERVO SECTION	
TRANSISTOR	
Q6201	B-7
IC	
IC6201	A-6
CONNECTOR	
P6201	C-2
TEST POINT	
TP6201	D-6
TP6202	D-5
TP6203	E-3
TP6204	F-3
TP6205	E-6
TP6206	G-3
TP6207	H-3
TP6208	B-6
TP6209	B-6
ADJUSTMENT	
R6201	E-3

MAIN II (SIGNAL PROCESS/AUDIO) SCHEMATIC DIAGRAM (I)

NOTE: HOW TO READ CONVERGED LINES

(100) B4

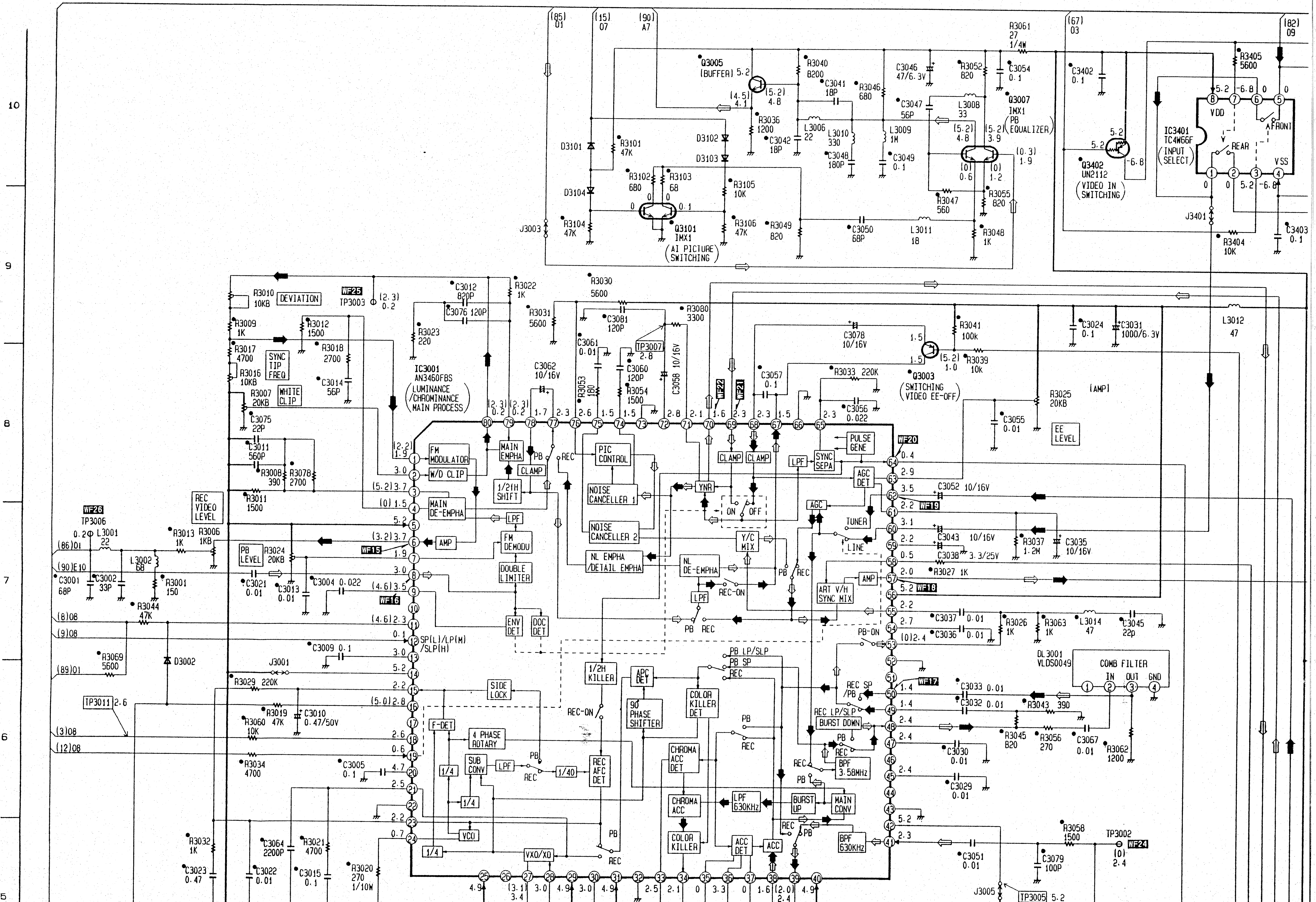
LOCATION GRID NUMBER OF THE OTHER END OF THE LINE

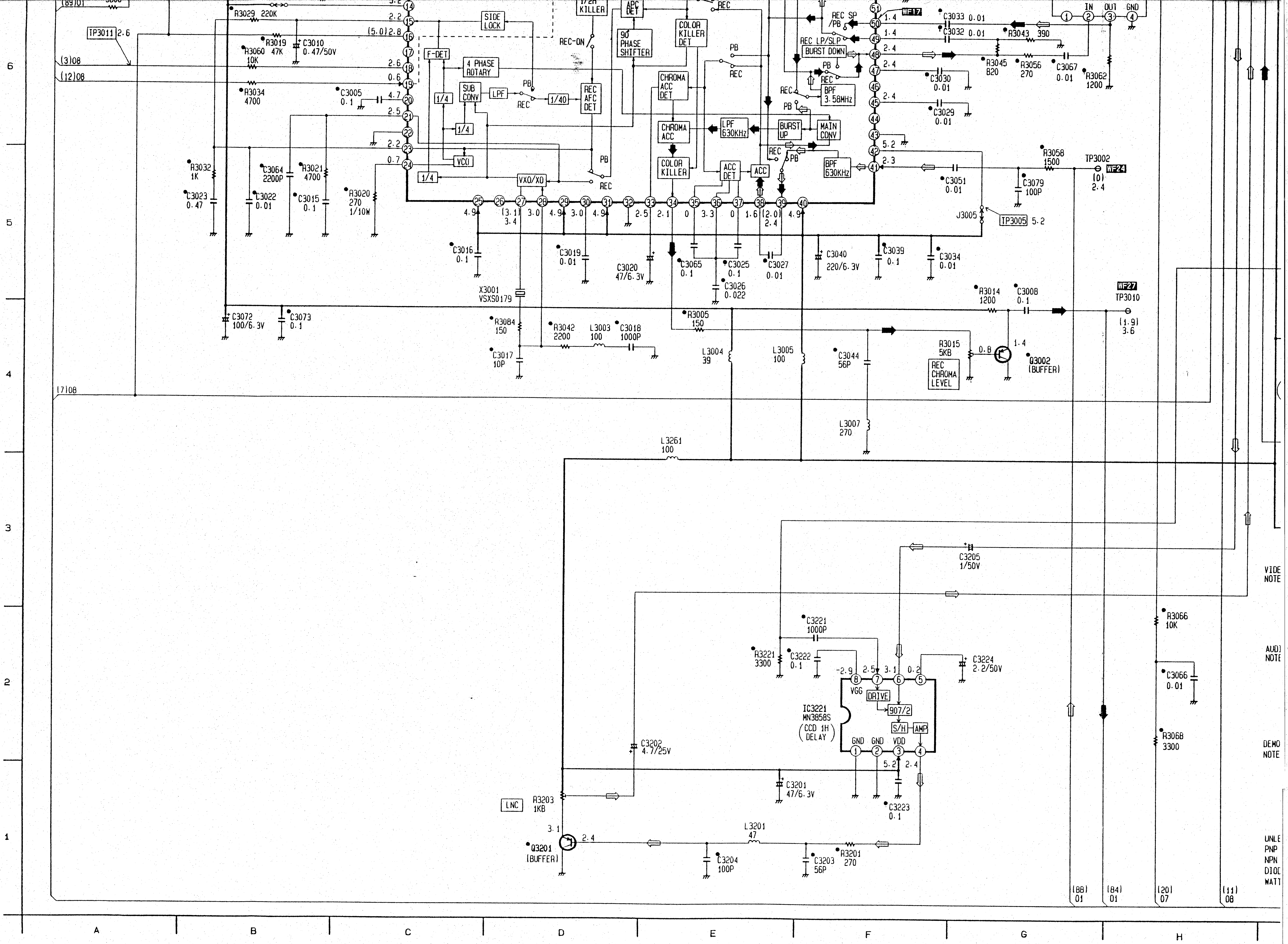
LINE NUMBER

NOTE:

1. DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.
2. TO MAINTAIN ORIGINAL FUNCTION AND RELIABILITY OF REPAIRED UNITS, USE ONLY ORIGINAL REPLACEMENT PARTS WHICH ARE LISTED WITH THEIR PART NUMBERS IN THE PARTS LIST SECTION OF THE SERVICE MANUAL.

◀ REC VIDEO SIGNAL ⇦ PB VIDEO SIGNAL ◀ REC AUDIO SIGNAL ⇦ PB AUDIO SIGNAL ◀ CYLINDER SERVO


10
9
8
7
6
5
(85) 01
(15) 07
(90) A7
(67) 03
(82) 09
Q3005 (BUFFER)
R3040 8200
C3041 18P
R3046 680
C3046 47/6.3V
R3052 820
C3054 0.1
R3061 27 1/4W
C3047 56P
L3008 33
Q3007 IMX1 (PB EQUALIZER)
R3036 1200
L3006 22
L3010 330
L3009 1M
C3042 18P
C3048 180P
C3049 0.1
R3101 47K
D3101
D3102
D3103
D3104
R3102 680
R3103 68
R3105 10K
Q3101 IMX1 (AI PICTURE SWITCHING)
R3104 47K
J3003
R3106 47K
R3049 820
C3050 68P
L3011 18
R3047 560
R3055 820
R3048 1K
C3402 0.1
R3405 5600
Q3402 UN2112 (VIDEO IN SWITCHING)
IC3401 TC4W66F (INPUT SELECT)
VDD
VSS
FRONT
REAR
J3401
R3404 10K
C3403 0.1
R3010 10KB
DEVIATION
WF25
TP3003
R3009 1K
R3012 1500
R3017 4700
SYNC TIP FREQ
R3018 2700
R3016 10KB
R3007 20KB
WHITE CLIP
C3014 56P
C3075 22P
C3011 560P
R3008 390
R3078 2700
R3011 1500
C3012 820P
C3076 120P
R3022 1K
R3023 220
R3031 5600
R3030 5600
C3081 120P
R3080 3300
TP3007
C3061 0.01
C3062 10/16V
R3053 180
C3060 120P
R3054 1500
C3058 10/16V
WF22
WF21
C3057 0.1
C3078 10/16V
R3041 100k
R3039 10k
Q3003 (SWITCHING VIDEO EE-OFF)
R3033 220K
C3056 0.022
R3025 20KB
(AMP)
C3055 0.01
EE LEVEL
C3024 0.1
C3031 1000/6.3V
L3012 47
IC3001 AN3460FBS (LUMINANCE /CHROMINANCE MAIN PROCESS)
FM MODULATOR
W/D CLIP
MAIN DE-EMPHA
MAIN EMPHA
CLAMP
1/2H SHIFT
LPF
FM DEMODU
DOUBLE LIMITER
ENV DET
DOC DET
AMP
PIC CONTROL
NOISE CANCELLER 1
NOISE CANCELLER 2
NL EMPHA /DETAIL EMPHA
NL DE-EMPHA
YNR
ON OFF
Y/C MIX
REC-ON
SYNC SEPA
PULSE GENE
AGC DET
AGC
TUNER
LINE
ART V/H SYNC MIX
WF20
WF19
WF18
WF17
WF16
WF15
WF26
TP3006
REC VIDEO LEVEL
L3001 22
R3013 1K
R3006 1KB
L3002 68
C3001 68P
C3002 33P
R3001 150
R3044 47K
PB LEVEL
R3024 20KB
C3021 0.01
C3013 0.01
C3004 0.022
R3069 5600
D3002
TP3011
J3001
R3029 220K
C3009 0.1
R3019 47K
C3010 0.47/50V
R3060 10K
R3034 4700
C3005 0.1
R3032 1K
C3064 2200P
R3021 4700
R3020 270 1/10W
C3023 0.47
C3022 0.01
C3015 0.1
SP(L)/LP(M) /SLP(H)
SIDE LOCK
F-DET
4 PHASE ROTARY
SUB CONV
1/4
LPF
1/40
REC AFC DET
VCO
VXO/XO
1/2H KILLER
APC DET
90 PHASE SHIFTER
COLOR KILLER DET
CHROMA ACC DET
CHROMA ACC
COLOR KILLER
LPF 630KHz
BURST UP
MAIN CONV
ACC DET
ACC
BPF 630KHz
BPF 3.58MHz
BURST DOWN
REC SP /PB
REC LP/SLP
PB LP/SLP
PB SP
REC
PB
PB-ON
C3052 10/16V
C3043 10/16V
C3038 3.3/25V
R3037 1.2M
C3035 10/16V
R3027 1K
C3037 0.01
C3036 0.01
R3026 1K
R3063 1K
L3014 47
C3045 22p
DL3001 VLDS0049
COMB FILTER
IN OUT GND
C3033 0.01
C3032 0.01
R3043 390
R3045 820
R3056 270
C3067 0.01
R3062 1200
C3030 0.01
C3029 0.01
R3058 1500
TP3002
WF24
C3051 0.01
C3079 100P
J3005
TP3005



TP3011
(3)08
(12)08
(17)08
R3029 220K
R3019 47K
R3060 10K
C3010 0.47/50V
R3034 4700
C3005 0.1
R3032 1K
C3023 0.47
C3064 2200P
C3022 0.01
R3021 4700
C3015 0.1
R3020 270 1/10W
C3072 100/6.3V
C3073 0.1
SIDE LOCK
F-DET
4 PHASE ROTARY
SUB CONV
LPF
1/4
1/40
REC AFC DET
VCO
VXO/XO
1/H KILLER
APC DET
90 PHASE SHIFTER
COLOR KILLER DET
CHROMA ACC DET
CHROMA ACC
COLOR KILLER
ACC DET
ACC
LPF 630KHz
BURST UP
MAIN CONV
BPF 630KHz
BPF 3.58MHz
BURST DOWN
REC LP/SLP
REC SP /PB
REC-ON
REC
PB
WF17
WF24
WF27
C3033 0.01
C3032 0.01
R3043 390
R3045 820
R3056 270
C3067 0.01
R3062 1200
C3030 0.01
C3029 0.01
R3058 1500
TP3002
C3051 0.01
C3079 100P
J3005
TP3005 5.2
C3016 0.1
C3019 0.01
C3020 47/6.3V
C3065 0.1
C3025 0.1
C3026 0.022
C3027 0.01
C3040 220/6.3V
C3039 0.1
C3034 0.01
X3001 VSXS0179
R3084 150
C3017 10P
R3042 2200
L3003 100
C3018 1000P
R3005 150
L3004 39
L3005 100
C3044 56P
L3007 270
R3014 1200
C3008 0.1
TP3010
R3015 5KB
REC CHROMA LEVEL
Q3002 (BUFFER)
L3261 100
IN
OUT
GND
C3205 1/50V
C3221 1000P
R3221 3300
C3222 0.1
C3224 2.2/50V
IC3221 MN3858S (CCD 1H DELAY)
VGG
DRIVE
907/2
S/H
AMP
GND
GND
VDD
C3202 4.7/25V
C3201 47/6.3V
C3223 0.1
LNC
R3203 1KB
Q3201 (BUFFER)
L3201 47
C3204 100P
C3203 56P
R3201 270
R3066 10K
C3066 0.01
R3068 3300
(88) 01
(84) 01
(20) 07
(11) 08
VIDE NOTE
AUDI NOTE
DEMO NOTE
UNLE
PNP
NPN
DIOD
WATT
A
B
C
D
E
F
G
H
1
2
3
4
5
6

ESS/AUDIO) SCHEMATIC DIAGRAM (I)

THER END OF THE LINE

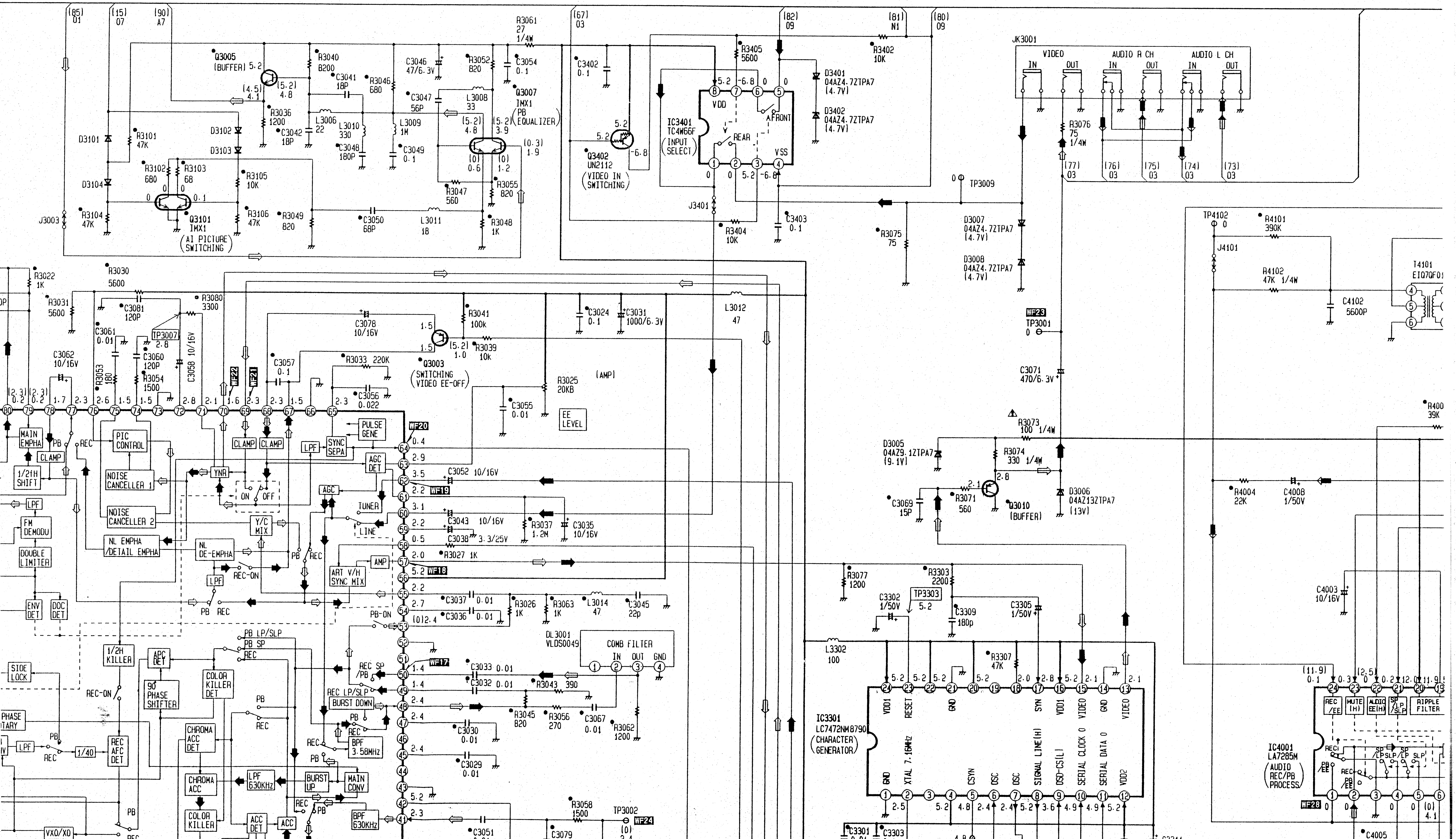
NOTE:
1. DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.
2. TO MAINTAIN ORIGINAL FUNCTION AND RELIABILITY OF REPAIRED UNITS, USE ONLY ORIGINAL REPLACEMENT PARTS WHICH ARE LISTED WITH THEIR PART NUMBERS IN THE PARTS LIST SECTION OF THE SERVICE MANUAL.

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS,
USE ONLY THE SPECIFIED PARTS.

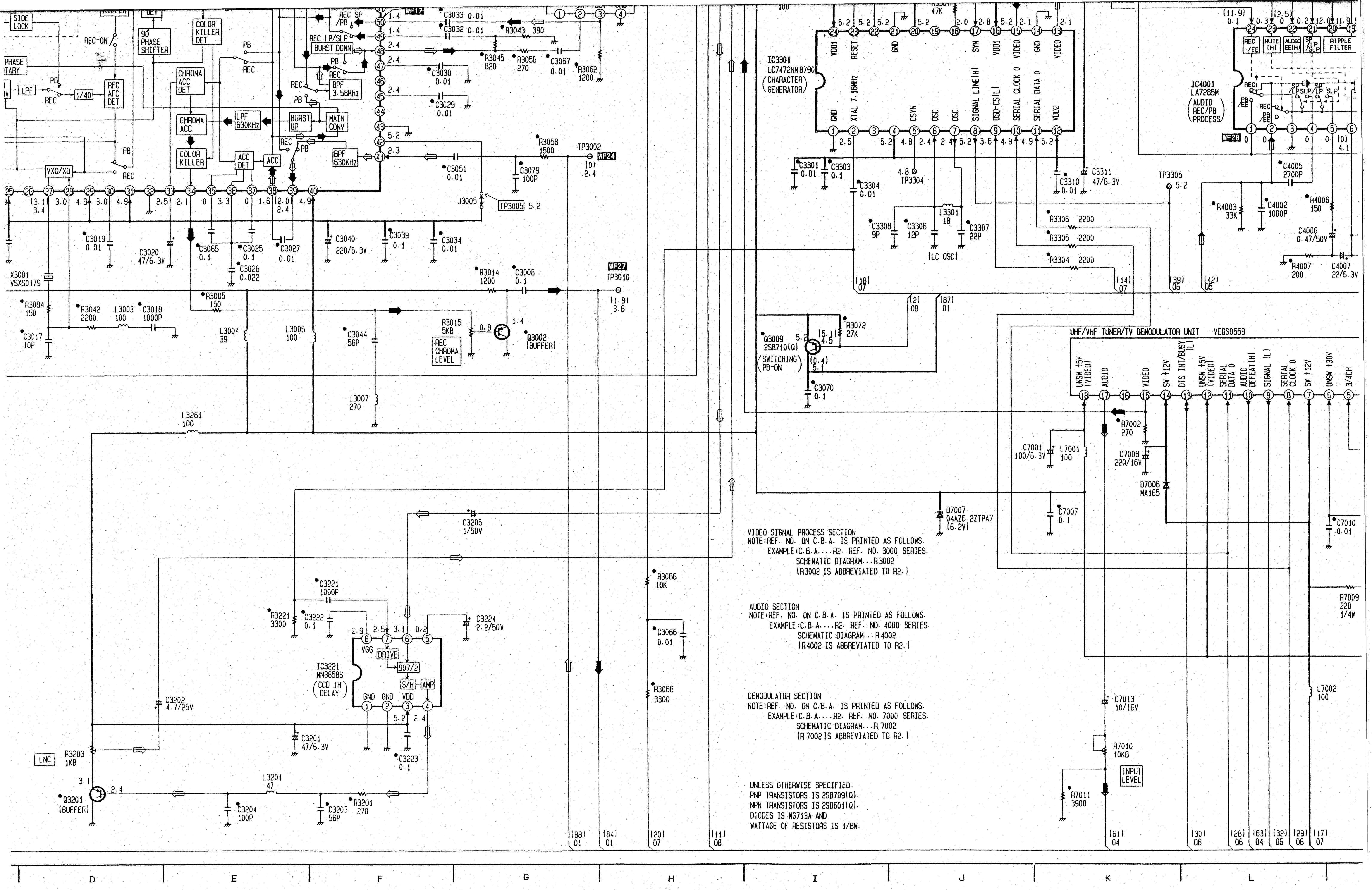
NOTE: THE MARK "•" INDICATES LEA
(CHIP) COMPONENTS.

PB AUDIO SIGNAL

CYLINDER SERVO



Q3005 (BUFFER)
Q3101 IMX1 (AI PICTURE SWITCHING)
Q3007 IMX1 (PB EQUALIZER)
Q3402 UN2112 (VIDEO IN SWITCHING)
IC3401 TC4W66F (INPUT SELECT)
VDD
VSS
FRONT
REAR
D3401 04AZ4.7ZTPA7 (4.7V)
D3402 04AZ4.7ZTPA7 (4.7V)
JK3001
VIDEO
AUDIO R CH
AUDIO L CH
IN
OUT
TP3009
J3401
J3003
D3007 04AZ4.7ZTPA7 (4.7V)
D3008 04AZ4.7ZTPA7 (4.7V)
TP4102
J4101
T4101 EI07QF01
WF23
TP3001
C3071 470/6.3V
R3073 100 1/4W
R3074 330 1/4W
D3005 04AZ9.1ZTPA7 (9.1V)
D3006 04AZ13ZTPA7 (13V)
Q3010 (BUFFER)
Q3003 (SWITCHING VIDEO EE-OFF)
R3025 20KB
(AMP)
EE LEVEL
MAIN EMPHA
CLAMP
1/2H SHIFT
LPF
FM DEMODU
DOUBLE LIMITER
ENV DET
DOC DET
SIDE LOCK
PHASE ROTARY
PIC CONTROL
NOISE CANCELLER 1
NOISE CANCELLER 2
NL EMPHA /DETAIL EMPHA
NL DE-EMPHA
YNR
ON
OFF
Y/C MIX
REC-ON
PB
REC
PULSE GENE
SYNC SEPA
AGC DET
AGC
TUNER
LINE
AMP
ART V/H SYNC MIX
PB-ON
PB LP/SLP
PB SP
REC SP /PB
REC LP/SLP
BURST DOWN
BPF 3.58MHz
BURST UP
MAIN CONV
BPF 630KHz
ACC
ACC DET
LPF 630KHz
CHROMA ACC
CHROMA ACC DET
COLOR KILLER
COLOR KILLER DET
APC DET
90 PHASE SHIFTER
1/2H KILLER
REC AFC DET
1/40
REC-ON
VXO/XO
WF17
WF18
WF19
WF20
WF21
WF22
WF24
WF28
DL3001 VLDS0049
COMB FILTER
IN
OUT
GND
IC3301 LC7472NM8790 (CHARACTER GENERATOR)
VDD1
RESET
GND
SYN
VIDEO
XTAL 7.16MHz
CSYN
OSC
SIGNAL LINE(H)
OSD-CS(L)
SERIAL CLOCK 0
SERIAL DATA 0
VDD2
TP3303
TP3002
TP3007
L3302 100
IC4001 LA7285M (AUDIO REC/PB PROCESS)
REC /EE
MUTE (H)
AUDIO EE(H)
SP /SLP
RIPPLE FILTER


SIDE LOCK
REC-ON
PHASE ROTARY
LPF
1/40
REC AFC DET
90 PHASE SHIFTER
COLOR KILLER DET
CHROMA ACC DET
CHROMA ACC
COLOR KILLER
LPF 630KHz
BURST UP
MAIN CONV
ACC DET
ACC
BPF 3.58MHz
BPF 630KHz
REC SP /PB
REC LP/SLP
BURST DOWN
VXO/XO
X3001 VSXS0179
WF17
WF24
WF27
WF28
TP3002
TP3005
TP3010
TP3304
TP3305
J3005
Q3002 (BUFFER)
REC CHROMA LEVEL
R3015 5KB
L3261 100
IC3221 MN3858S (CCD 1H DELAY)
VGG
DRIVE
907/2
S/H
AMP
GND
VDD
Q3201 (BUFFER)
LNC
R3203 1KB
L3201 47
IC3301 LC7472NM8790 (CHARACTER GENERATOR)
VDD1
RESET
GND
SYN
VIDEO
XTAL 7.16MHz
CSYN
OSC
SIGNAL LINE(H)
OSD-CS(L)
SERIAL CLOCK 0
SERIAL DATA 0
VDD2
L3301 18
(LC OSC)
Q3009 2SB710(Q) (SWITCHING PB-ON)
D7007 04AZ6.2ZTPA7 (6.2V)
IC4001 LA7285M (AUDIO REC/PB PROCESS)
REC /EE
MUTE (H)
AUDIO EE(H)
SP /LP /SLP
RIPPLE FILTER
UHF/VHF TUNER/TV DEMODULATOR UNIT VEQS0559
UNSW +5V (VIDEO)
AUDIO
SW +12V
DTS INT/BUSY (L)
SERIAL DATA 0
AUDIO DEFEAT(H)
SIGNAL (L)
SERIAL CLOCK 0
UNSW +30V
3/4CH
D7006 MA165
R7010 10KB
INPUT LEVEL
L7002 100
R7009 220 1/4W
D
E
F
G
H
I
J
K
L

VIDEO SIGNAL PROCESS SECTION
NOTE: REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE: C.B.A....R2. REF. NO. 3000 SERIES.
SCHEMATIC DIAGRAM...R3002
(R3002 IS ABBREVIATED TO R2.)

AUDIO SECTION
NOTE: REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE: C.B.A....R2. REF. NO. 4000 SERIES.
SCHEMATIC DIAGRAM...R4002
(R4002 IS ABBREVIATED TO R2.)

DEMODULATOR SECTION
NOTE: REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE: C.B.A....R2. REF. NO. 7000 SERIES.
SCHEMATIC DIAGRAM...R7002
(R7002 IS ABBREVIATED TO R2.)

UNLESS OTHERWISE SPECIFIED:
PNP TRANSISTORS IS 2SB709(Q).
NPN TRANSISTORS IS 2SD601(Q).
DIODES IS MG713A AND
WATTAGE OF RESISTORS IS 1/8W.

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SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.
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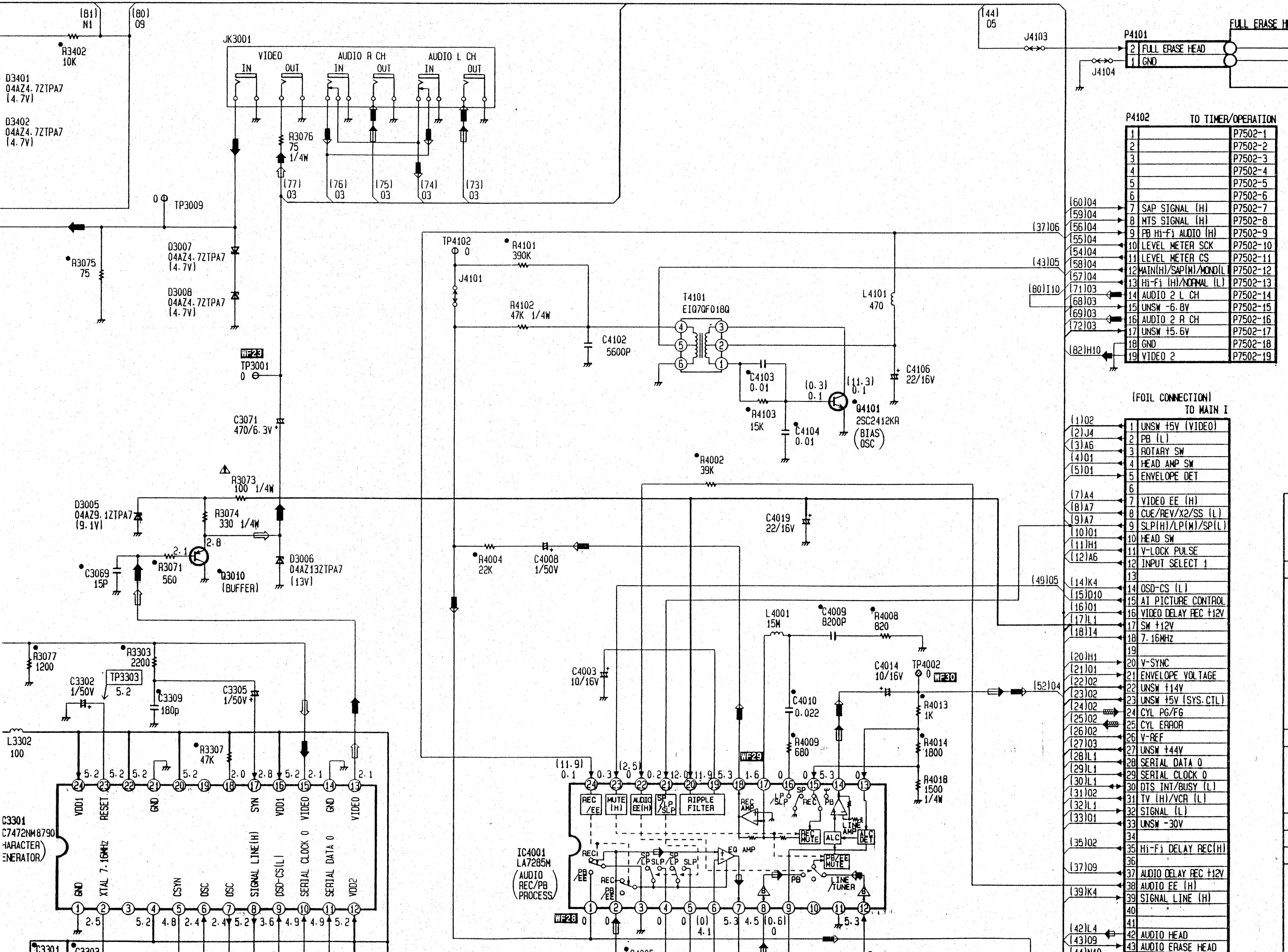
USE ONLY THE SPECIFIED PARTS.

NOTE: THE MARK "•" INDICATES LEADLESS
(CHIP) COMPONENTS.

TEST POINT INFORMATION
⦶ : TEST POINT WITH A JUMPER WIRE ACROSS A HOLE IN THE P.C.B.
▭→ : TEST POINT WITH A COMPONENT LEAD ON THE FOIL SIDE.
⊘ : TEST POINT WITH NO TEST PIN.
● : TEST POINT WITH A TEST PIN.


FULL ERASE HEAD C.B.A. UNIT
FULL ERASE HEAD
VJBS04B2
P4101
J4103
J4104
JK3001
VIDEO IN OUT
AUDIO R CH IN OUT
AUDIO L CH IN OUT
R3402 10K
D3401 04AZ4.7ZTPA7 (4.7V)
D3402 04AZ4.7ZTPA7 (4.7V)
R3076 75 1/4W
TP3009
R3075 75
D3007 04AZ4.7ZTPA7 (4.7V)
D3008 04AZ4.7ZTPA7 (4.7V)
WF23 TP3001
C3071 470/6.3V
R3073 100 1/4W
D3005 04AZ9.1ZTPA7 (9.1V)
R3074 330 1/4W
C3069 15P
R3071 560
Q3010 (BUFFER)
D3006 04AZ13ZTPA7 (13V)
TP4102
R4101 390K
J4101
R4102 47K 1/4W
C4102 5600P
T4101 EI07QF018Q
L4101 470
C4103 0.01
R4103 15K
C4104 0.01
Q4101 2SC2412KR (BIAS OSC)
C4106 22/16V
R4002 39K
C4019 22/16V
R4004 22K
C4008 1/50V
R3077 1200
R3303 2200
C3302 1/50V
TP3303
C3309 180p
C3305 1/50V
L3302 100
R3307 47K
IC3301 C7472NM8790 (CHARACTER GENERATOR)
VDD1 RESET GND SYN VDD1 VIDEO GND VIDEO
GND XTAL 7.16MHz CSYN OSC OSC SIGNAL LINE(H) OSD-CS(L) SERIAL CLOCK 0 SERIAL DATA 0 VDD2
C4003 10/16V
L4001 15M
C4009 8200P
R4008 820
C4014 10/16V
TP4002 WF30
C4010 0.022
R4009 680
R4013 1K
R4014 1800
R4018 1500 1/4W
WF29
WF28
IC4001 LA7285M (AUDIO REC/PB PROCESS)
REC/EE MUTE(H) AUDIO EE(H) SP/LP SLP RIPPLE FILTER REC AMP EQ AMP LINE AMP ALC DET REC MUTE PB MUTE LINE/TUNER
P4102 TO TIMER/OPERATION
1 P7502-1
2 P7502-2
3 P7502-3
4 P7502-4
5 P7502-5
6 P7502-6
7 SAP SIGNAL (H) P7502-7
8 MTS SIGNAL (H) P7502-8
9 PB Hi-Fi AUDIO (H) P7502-9
10 LEVEL METER SCK P7502-10
11 LEVEL METER CS P7502-11
12 MAIN(H)/SAP(H)/MONO(L) P7502-12
13 Hi-Fi (H)/NORMAL (L) P7502-13
14 AUDIO 2 L CH P7502-14
15 UNSW -6.8V P7502-15
16 AUDIO 2 R CH P7502-16
17 UNSW +5.6V P7502-17
18 GND P7502-18
19 VIDEO 2 P7502-19
(FOIL CONNECTION) TO MAIN I
1 UNSW +5V (VIDEO)
2 PB (L)
3 ROTARY SW
4 HEAD AMP SW
5 ENVELOPE DET
6
7 VIDEO EE (H)
8 CUE/REV/X2/SS (L)
9 SLP(H)/LP(M)/SP(L)
10 HEAD SW
11 V-LOCK PULSE
12 INPUT SELECT 1
13
14 OSD-CS (L)
15 AI PICTURE CONTROL
16 VIDEO DELAY REC +12V
17 SW +12V
18 7.16MHz
19
20 V-SYNC
21 ENVELOPE VOLTAGE
22 UNSW +14V
23 UNSW +5V (SYS.CTL)
24 CYL PG/FG
25 CYL ERROR
26 V-REF
27 UNSW +44V
28 SERIAL DATA 0
29 SERIAL CLOCK 0
30 DTS INT/BUSY (L)
31 TV (H)/VCR (L)
32 SIGNAL (L)
33 UNSW -30V
34
35 Hi-Fi DELAY REC(H)
36
37 AUDIO DELAY REC +12V
38 AUDIO EE (H)
39 SIGNAL LINE (H)
40
41
42 AUDIO HEAD
43 AUDIO ERASE HEAD

COMPARISON CHART
OF MODELS & MARKS

MODEL	MARK
PV-4308	A
PV-4311	B
PV-4311-K	C
PV-4315S	D
PV-4325S	E
PV-4351	F
PV-4351-K	G
PV-4358	H
PV-4355S	I

VIDEO SIGNAL
PROCESS SECTION

TRANSISTOR	
Q3002	G-4
Q3003	F-8
Q3005	E-10
Q3007	G-10
Q3009	I-4
Q3010	J-7
Q3101	E-9
Q3201	D-1
Q3402	G-10
IC	
IC3001	C-8
IC3221	F-2
IC3301	I-6
IC3401	H-10
CONNECTOR	
P3001	0-2
TEST POINT	
TP3001	J-8
TP3002	G-5
TP3003	C-9
TP3005	G-5
TP3006	A-7

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SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.
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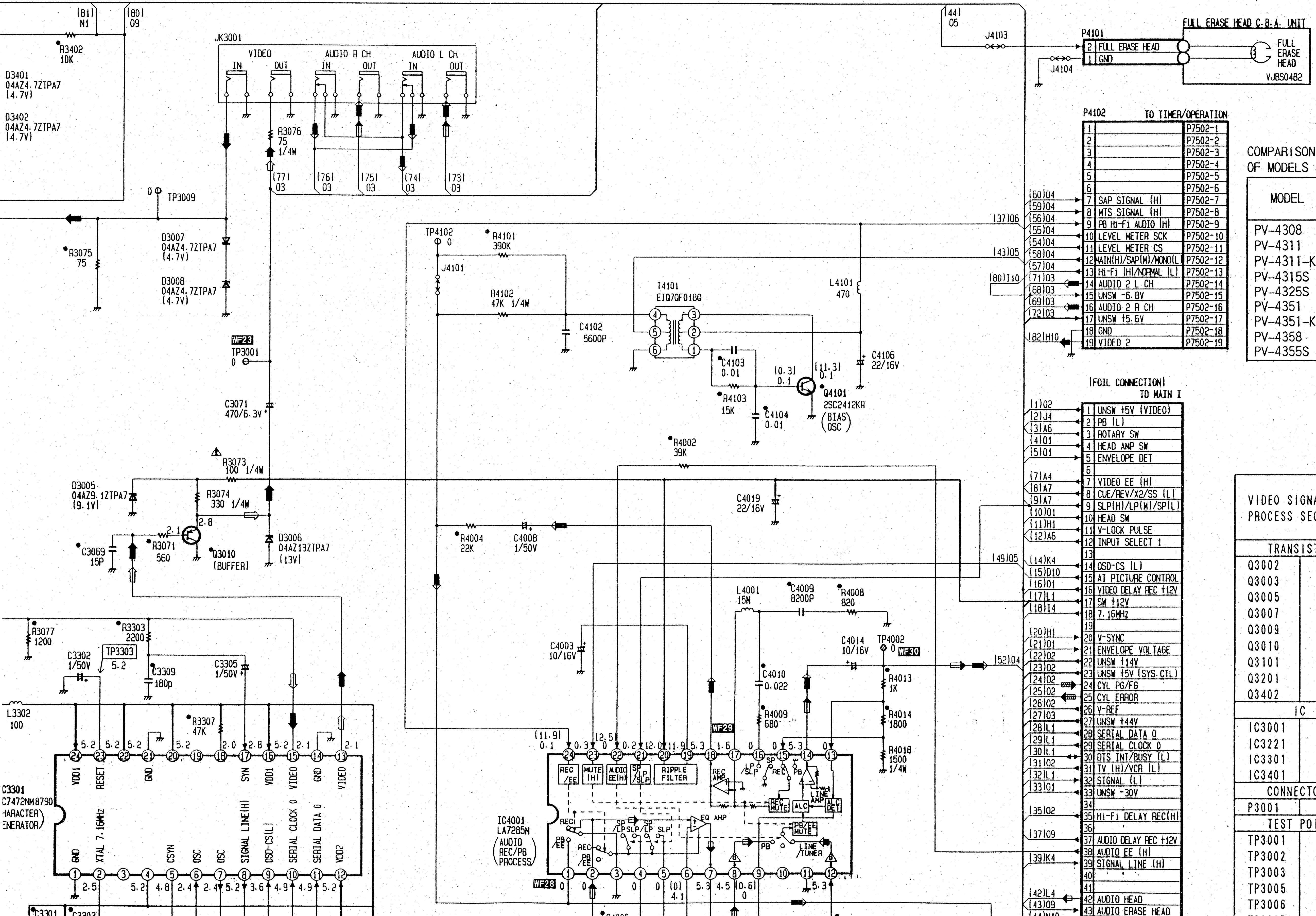
USE ONLY THE SPECIFIED PARTS.

NOTE: THE MARK "•" INDICATES LEADLESS
(CHIP) COMPONENTS.

TEST POINT INFORMATION
⦶ : TEST POINT WITH A JUMPER WIRE ACROSS A HOLE IN THE P.C.B.
▭→ : TEST POINT WITH A COMPONENT LEAD ON THE FOIL SIDE.
⊘ : TEST POINT WITH NO TEST PIN.
● : TEST POINT WITH A TEST PIN.

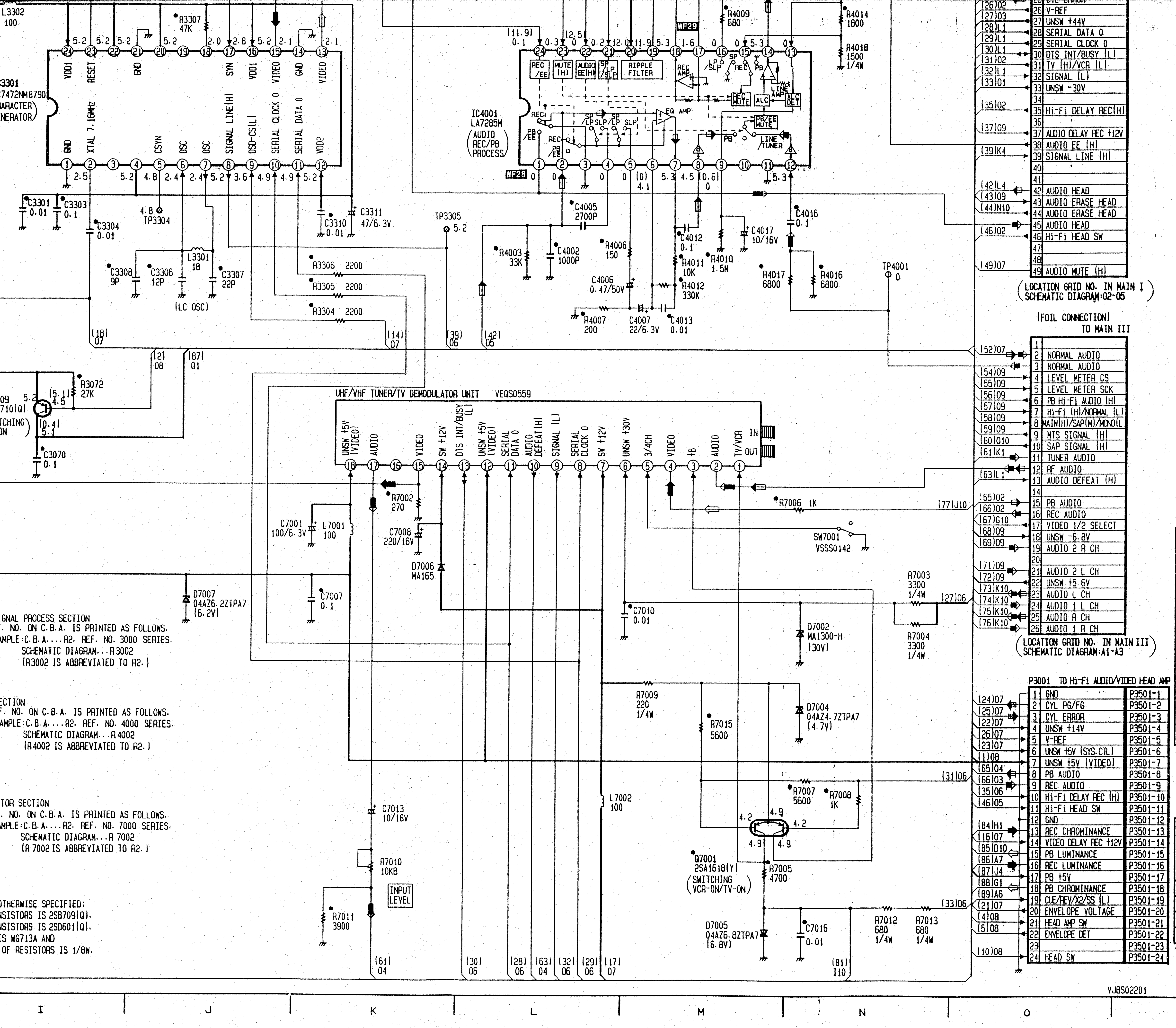

JK3001
VIDEO
AUDIO R CH
AUDIO L CH
IN
OUT
R3402 10K
D3401 04AZ4.7ZTPA7 (4.7V)
D3402 04AZ4.7ZTPA7 (4.7V)
R3076 75 1/4W
TP3009
R3075 75
D3007 04AZ4.7ZTPA7 (4.7V)
D3008 04AZ4.7ZTPA7 (4.7V)
WF23
TP3001
C3071 470/6.3V
R3073 100 1/4W
D3005 04AZ9.1ZTPA7 (9.1V)
R3074 330 1/4W
C3069 15P
R3071 560
Q3010 (BUFFER)
D3006 04AZ13ZTPA7 (13V)
R3077 1200
R3303 2200
C3302 1/50V
TP3303
C3309 180p
C3305 1/50V
R3307 47K
L3302 100
IC3301 C7472NM8790 CHARACTER GENERATOR
VDD1
RESET
GND
SYN
VIDEO
XTAL 7.16MHz
CSYN
OSC
SIGNAL LINE(H)
OSD-CS(L)
SERIAL CLOCK 0
SERIAL DATA 0
VDD2
TP4102
R4101 390K
J4101
R4102 47K 1/4W
C4102 5600P
T4101 EI07QF018Q
L4101 470
C4106 22/16V
C4103 0.01
R4103 15K
C4104 0.01
Q4101 2SC2412KR (BIAS OSC)
R4002 39K
C4019 22/16V
R4004 22K
C4008 1/50V
L4001 15M
C4009 8200P
R4008 820
C4003 10/16V
C4014 10/16V
TP4002
WF30
C4010 0.022
R4013 1K
R4009 680
R4014 1800
R4018 1500 1/4W
WF29
WF28
IC4001 LA7285M (AUDIO REC/PB PROCESS)
REC /EE
MUTE (H)
AUDIO EE(H)
SP /SLP
RIPPLE FILTER
REC AMP
EQ AMP
LINE AMP
ALC DET
REC MUTE
ALC
PB/EE MUTE
LINE TUNER
J4103
J4104
P4101
FULL ERASE HEAD
GND
FULL ERASE HEAD C.B.A. UNIT
FULL ERASE HEAD
VJBS04B2
P4102 TO TIMER/OPERATION
7 SAP SIGNAL (H) P7502-7
8 MTS SIGNAL (H) P7502-8
9 PB Hi-Fi AUDIO (H) P7502-9
10 LEVEL METER SCK P7502-10
11 LEVEL METER CS P7502-11
12 MAIN(H)/SAP(M)/MONO(L) P7502-12
13 Hi-Fi (H)/NORMAL (L) P7502-13
14 AUDIO 2 L CH P7502-14
15 UNSW -6.8V P7502-15
16 AUDIO 2 R CH P7502-16
17 UNSW +5.6V P7502-17
18 GND P7502-18
19 VIDEO 2 P7502-19
(FOIL CONNECTION) TO MAIN I
1 UNSW +5V (VIDEO)
2 PB (L)
3 ROTARY SW
4 HEAD AMP SW
5 ENVELOPE DET
7 VIDEO EE (H)
8 CUE/REV/X2/SS (L)
9 SLP(H)/LP(M)/SP(L)
10 HEAD SW
11 V-LOCK PULSE
12 INPUT SELECT 1
14 OSD-CS (L)
15 AI PICTURE CONTROL
16 VIDEO DELAY REC +12V
17 SW +12V
18 7.16MHz
20 V-SYNC
21 ENVELOPE VOLTAGE
22 UNSW +14V
23 UNSW +5V (SYS.CTL)
24 CYL PG/FG
25 CYL ERROR
26 V-REF
27 UNSW +44V
28 SERIAL DATA 0
29 SERIAL CLOCK 0
30 DTS INT/BUSY (L)
31 TV (H)/VCR (L)
32 SIGNAL (L)
33 UNSW -30V
35 Hi-Fi DELAY REC(H)
37 AUDIO DELAY REC +12V
38 AUDIO EE (H)
39 SIGNAL LINE (H)
42 AUDIO HEAD
43 AUDIO ERASE HEAD

COMPARISON CHART
OF MODELS & MARKS

MODEL	MARK
PV-4308	A
PV-4311	B
PV-4311-K	C
PV-4315S	D
PV-4325S	E
PV-4351	F
PV-4351-K	G
PV-4358	H
PV-4355S	I

VIDEO SIGNAL
PROCESS SECTION

TRANSISTOR	
Q3002	G-4
Q3003	F-8
Q3005	E-10
Q3007	G-10
Q3009	I-4
Q3010	J-7
Q3101	E-9
Q3201	D-1
Q3402	G-10
IC	
IC3001	C-8
IC3221	F-2
IC3301	I-6
IC3401	H-10
CONNECTOR	
P3001	0-2
TEST POINT	
TP3001	J-8
TP3002	G-5
TP3003	C-9
TP3005	G-5
TP3006	A-7


IC3301
7472NM8790
CHARACTER
GENERATOR
IC4001
LA7285M
(AUDIO REC/PB PROCESS)
UHF/VHF TUNER/TV DEMODULATOR UNIT VEQS0559
Q7001
2SA1618(Y)
(SWITCHING VCR-ON/TV-ON)
SW7001
VSSS0142
INPUT LEVEL
(LOCATION GRID NO. IN MAIN I SCHEMATIC DIAGRAM:02-05)
(FOIL CONNECTION) TO MAIN III
(LOCATION GRID NO. IN MAIN III SCHEMATIC DIAGRAM:A1-A3)
P3001 TO Hi-Fi AUDIO/VIDEO HEAD AMP
26 V-REF
27 UNSW +14V
28 SERIAL DATA 0
29 SERIAL CLOCK 0
30 DTS INT/BUSY (L)
31 TV (H)/VCR (L)
32 SIGNAL (L)
33 UNSW -30V
35 Hi-Fi DELAY REC(H)
37 AUDIO DELAY REC +12V
38 AUDIO EE (H)
39 SIGNAL LINE (H)
42 AUDIO HEAD
43 AUDIO ERASE HEAD
44 AUDIO ERASE HEAD
45 AUDIO HEAD
46 Hi-Fi HEAD SW
49 AUDIO MUTE (H)
2 NORMAL AUDIO
3 NORMAL AUDIO
4 LEVEL METER CS
5 LEVEL METER SCK
6 PB Hi-Fi AUDIO (H)
7 Hi-Fi (H)/NORMAL (L)
8 MAIN(H)/SAP(M)/MONO(L)
9 MTS SIGNAL (H)
10 SAP SIGNAL (H)
11 TUNER AUDIO
12 RF AUDIO
13 AUDIO DEFEAT (H)
15 PB AUDIO
16 REC AUDIO
17 VIDEO 1/2 SELECT
18 UNSW -6.8V
19 AUDIO 2 R CH
21 AUDIO 2 L CH
22 UNSW +5.6V
23 AUDIO L CH
24 AUDIO 1 L CH
25 AUDIO R CH
26 AUDIO 1 R CH
1 GND P3501-1
2 CYL PG/FG P3501-2
3 CYL ERROR P3501-3
4 UNSW +14V P3501-4
5 V-REF P3501-5
6 UNSW +5V (SYS.CTL) P3501-6
7 UNSW +5V (VIDEO) P3501-7
8 PB AUDIO P3501-8
9 REC AUDIO P3501-9
10 Hi-Fi DELAY REC (H) P3501-10
11 Hi-Fi HEAD SW P3501-11
12 GND P3501-12
13 REC CHROMINANCE P3501-13
14 VIDEO DELAY REC +12V P3501-14
15 PB LUMINANCE P3501-15
16 REC LUMINANCE P3501-16
17 PB +5V P3501-17
18 PB CHROMINANCE P3501-18
19 CUE/REV/X2/SS (L) P3501-19
20 ENVELOPE VOLTAGE P3501-20
21 HEAD AMP SW P3501-21
22 ENVELOPE DET P3501-22
23 P3501-23
24 HEAD SW P3501-24
VJBS02201
I
J
K
L
M
N
O
P

IGNAL PROCESS SECTION
. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
AMPLE:C.B.A....R2. REF. NO. 3000 SERIES.
SCHEMATIC DIAGRAM...R3002
(R3002 IS ABBREVIATED TO R2.)

ECTION
F. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
AMPLE:C.B.A....R2. REF. NO. 4000 SERIES.
SCHEMATIC DIAGRAM...R4002
(R4002 IS ABBREVIATED TO R2.)

TOR SECTION
. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
AMPLE:C.B.A....R2. REF. NO. 7000 SERIES.
SCHEMATIC DIAGRAM...R 7002
(R 7002 IS ABBREVIATED TO R2.)

OTHERWISE SPECIFIED:
NSISTORS IS 2SB709(Q).
NSISTORS IS 2SD601(Q).
IS WG713A AND
OF RESISTORS IS 1/8W.

IC	
IC3001	C-8
IC3221	F-2
IC3301	I-6
IC3401	H-10
CONNECTOR	
P3001	O-2
TEST POINT	
TP3001	J-8
TP3002	G-5
TP3003	C-9
TP3005	G-5
TP3006	A-7
TP3007	E-9
TP3009	J-10
TP3010	H-5
TP3011	A-6
TP3303	I-7
TP3304	J-5
TP3305	K-5
ADJUSTMENT	
R3006	B-7
R3007	B-8
R3010	B-9
R3015	G-4
R3016	B-8
R3024	B-7
R3025	G-8
R3203	D-1

AUDIO SECTION

TRANSISTOR	
Q4101	M-8
IC	
IC4001	L-6
CONNECTOR	
P4101	O-10
P4102	O-10
TEST POINT	
TP4001	N-5
TP4002	N-7
TP4102	K-9

DEMODULATOR SECTION

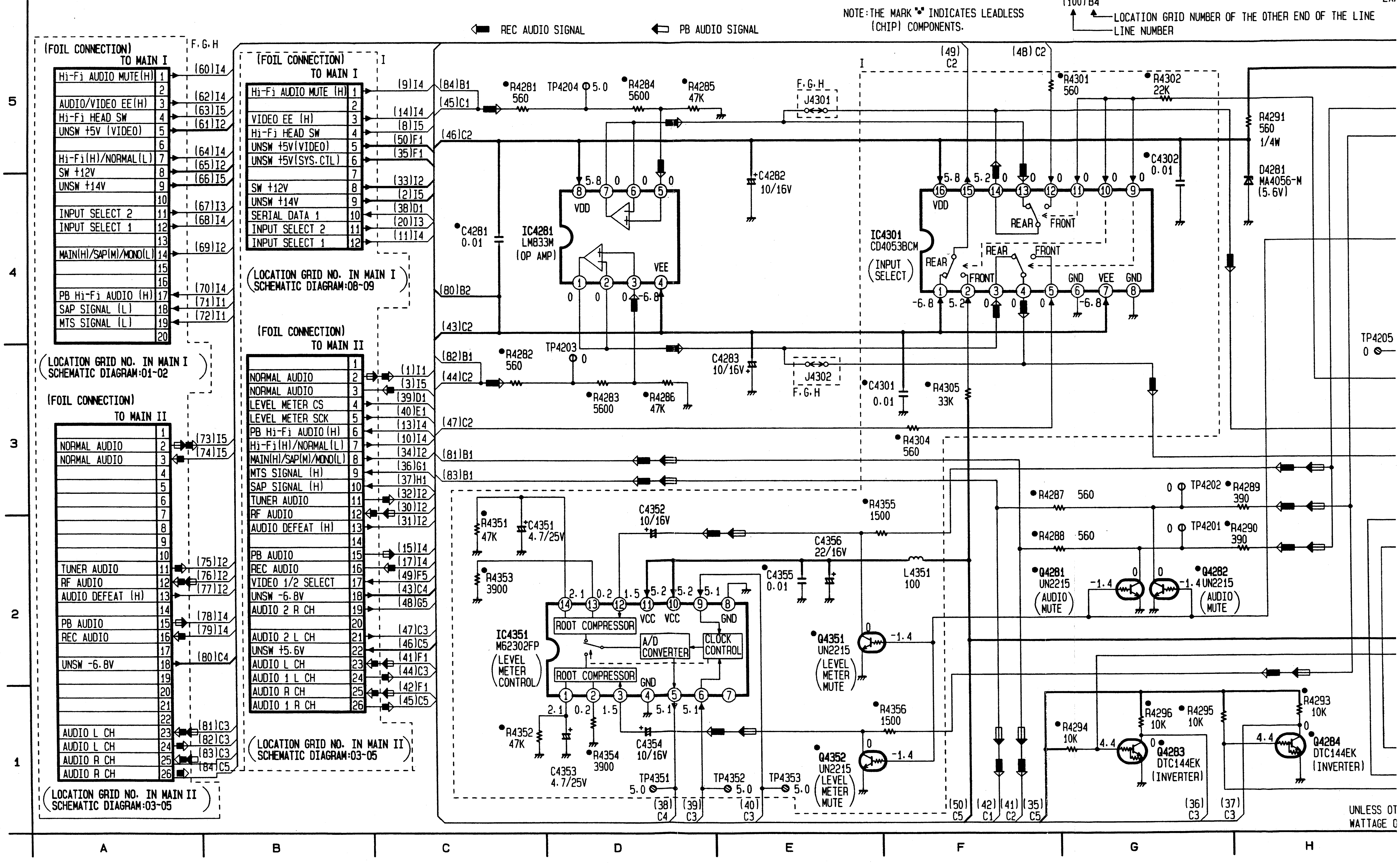
TRANSISTOR	
Q7001	M-1
ADJUSTMENT	
R7010	K-1

MAIN III (AUDIO/Hi-Fi AUDIO) SCHEMATIC DIAGRAM (F, G, H, I)

NOTE: HOW TO READ CONVERGED LINES
(100) B4
LOCATION GRID NUMBER OF THE OTHER END OF THE LINE
LINE NUMBER

NOTE: THE MARK "•" INDICATES LEADLESS (CHIP) COMPONENTS.

AUDIO SE
NOTE: REF
EX/



REC AUDIO SIGNAL
PB AUDIO SIGNAL
(FOIL CONNECTION) TO MAIN I
Hi-Fi AUDIO MUTE (H) 1
2
AUDIO/VIDEO EE (H) 3
Hi-Fi HEAD SW 4
UNSW +5V (VIDEO) 5
6
Hi-Fi (H)/NORMAL (L) 7
SW +12V 8
UNSW +14V 9
10
INPUT SELECT 2 11
INPUT SELECT 1 12
13
MAIN (H)/SAP (M)/MONO (L) 14
15
16
PB Hi-Fi AUDIO (H) 17
SAP SIGNAL (L) 18
MTS SIGNAL (L) 19
20
F, G, H
(60) I4
(62) I4
(63) I5
(61) I2
(64) I4
(65) I2
(66) I5
(67) I3
(68) I4
(69) I2
(70) I4
(71) I1
(72) I1
(LOCATION GRID NO. IN MAIN I SCHEMATIC DIAGRAM: 01-02)
(FOIL CONNECTION) TO MAIN II
NORMAL AUDIO 2
NORMAL AUDIO 3
TUNER AUDIO 11
RF AUDIO 12
AUDIO DEFEAT (H) 13
PB AUDIO 15
REC AUDIO 16
UNSW -6.8V 18
AUDIO L CH 23
AUDIO L CH 24
AUDIO R CH 25
AUDIO R CH 26
(73) I5
(74) I5
(75) I2
(76) I2
(77) I2
(78) I4
(79) I4
(80) C4
(81) C3
(82) C3
(83) C3
(84) C5
(LOCATION GRID NO. IN MAIN II SCHEMATIC DIAGRAM: 03-05)
(FOIL CONNECTION) TO MAIN I
I
Hi-Fi AUDIO MUTE (H) 1
2
VIDEO EE (H) 3
Hi-Fi HEAD SW 4
UNSW +5V (VIDEO) 5
UNSW +5V (SYS. CTL) 6
7
SW +12V 8
UNSW +14V 9
SERIAL DATA 1 10
INPUT SELECT 2 11
INPUT SELECT 1 12
(9) I4
(14) I4
(8) I5
(50) F1
(35) F1
(33) I2
(2) I5
(38) D1
(20) I3
(11) I4
(LOCATION GRID NO. IN MAIN I SCHEMATIC DIAGRAM: 08-09)
(FOIL CONNECTION) TO MAIN II
NORMAL AUDIO 2
NORMAL AUDIO 3
LEVEL METER CS 4
LEVEL METER SCK 5
PB Hi-Fi AUDIO (H) 6
Hi-Fi (H)/NORMAL (L) 7
MAIN (H)/SAP (M)/MONO (L) 8
MTS SIGNAL (H) 9
SAP SIGNAL (H) 10
TUNER AUDIO 11
RF AUDIO 12
AUDIO DEFEAT (H) 13
14
PB AUDIO 15
REC AUDIO 16
VIDEO 1/2 SELECT 17
UNSW -6.8V 18
AUDIO 2 R CH 19
20
AUDIO 2 L CH 21
UNSW +5.6V 22
AUDIO L CH 23
AUDIO 1 L CH 24
AUDIO R CH 25
AUDIO 1 R CH 26
(1) I1
(3) I5
(39) D1
(40) E1
(13) I4
(10) I4
(34) I2
(36) G1
(37) H1
(32) I2
(30) I2
(31) I2
(15) I4
(17) I4
(49) F5
(43) C4
(48) G5
(47) C3
(46) C5
(41) F1
(44) C3
(42) F1
(45) C5
(LOCATION GRID NO. IN MAIN II SCHEMATIC DIAGRAM: 03-05)
(84) B1
(45) C1
(46) C2
(80) B2
(43) C2
(82) B1
(44) C2
(47) C2
(81) B1
(83) B1
R4281 560
TP4204 5.0
R4284 5600
R4285 47K
F, G, H
J4301
C4282 10/16V
C4281 0.01
IC4281 LM833M (OP AMP)
VDD
VEE
5.8
-6.8
TP4203 0
R4282 560
R4283 5600
R4286 47K
C4283 10/16V
J4302
F, G, H
(49) C2
(48) C2
R4301 560
R4302 22K
C4302 0.01
R4291 560 1/4W
D4281 MA4056-M (5.6V)
IC4301 CD4053BCM (INPUT SELECT)
REAR
FRONT
GND
5.2
C4301 0.01
R4305 33K
R4304 560
TP4205 0
R4287 560
R4288 560
TP4202 0
TP4201 0
R4289 390
R4290 390
Q4281 UN2215 (AUDIO MUTE)
Q4282 UN2215 (AUDIO MUTE)
-1.4
R4355 1500
R4351 47K
C4351 4.7/25V
R4353 3900
C4352 10/16V
C4356 22/16V
C4355 0.01
L4351 100
IC4351 M62302FP (LEVEL METER CONTROL)
ROOT COMPRESSOR
A/D CONVERTER
CLOCK CONTROL
VCC
2.1
0.2
1.5
5.1
R4352 47K
R4354 3900
C4353 4.7/25V
C4354 10/16V
TP4351 5.0
TP4352 5.0
TP4353 5.0
Q4351 UN2215 (LEVEL METER MUTE)
Q4352 UN2215 (LEVEL METER MUTE)
R4356 1500
R4294 10K
R4296 10K
R4295 10K
R4293 10K
4.4
Q4283 DTC144EK (INVERTER)
Q4284 DTC144EK (INVERTER)
(38) C4
(39) C3
(40) C3
(50) C5
(42) C1
(41) C2
(35) C5
(36) C3
(37) C3
A
B
C
D
E
F
G
H
1
2
3
4
5

UNLESS OT
WATTAGE (

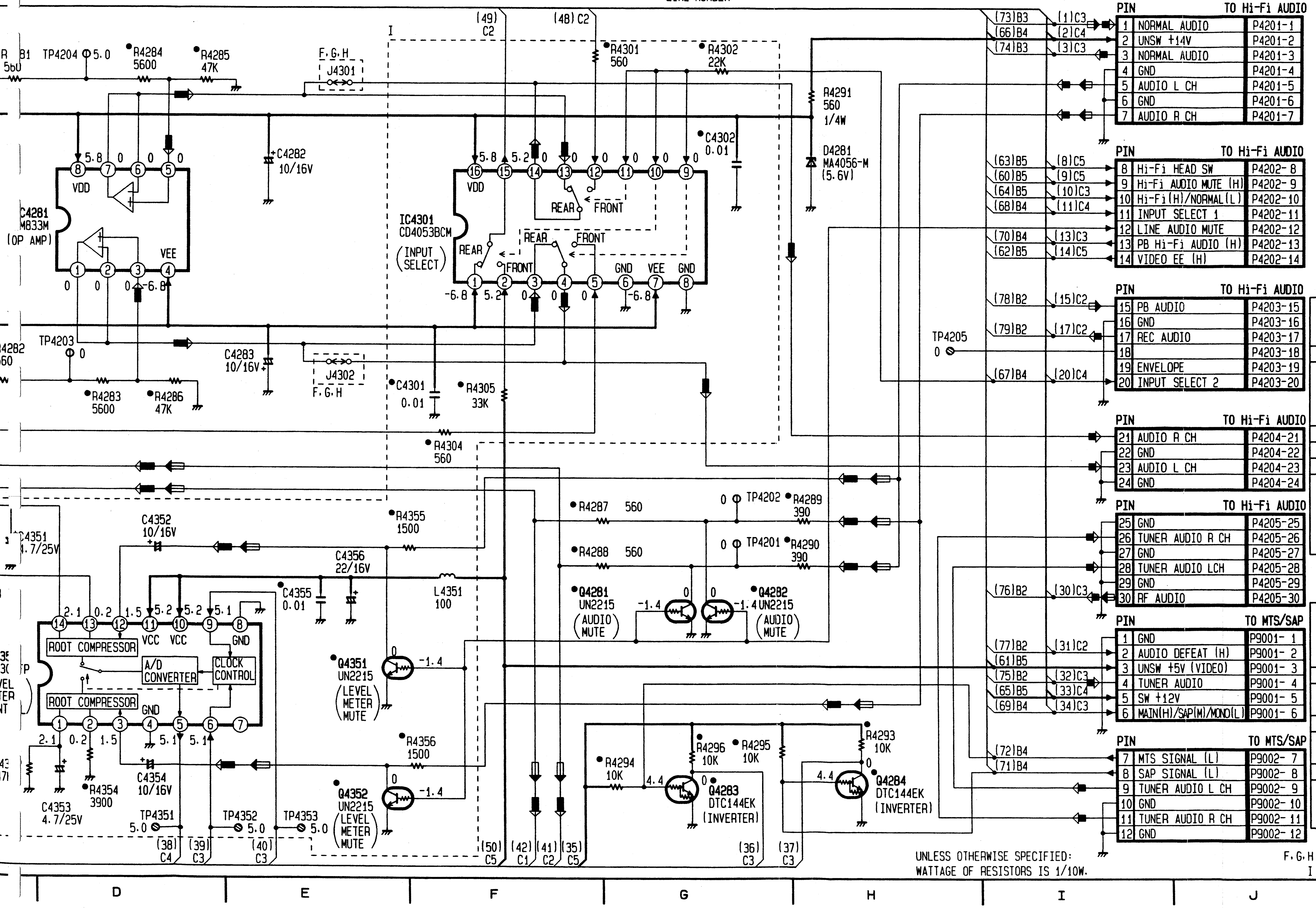
SCHEMATIC DIAGRAM (F, G, H, I)

NOTE: HOW TO READ CONVERGED LINES
(100) B4
LOCATION GRID NUMBER OF THE OTHER END OF THE LINE
LINE NUMBER

NOTE: THE MARK "•" INDICATES LEADLESS (CHIP) COMPONENTS.

AUDIO SECTION
NOTE: REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE: C.B.A.....R2, REF. NO. 4200 SERIES.
SCHEMATIC DIAGRAM...R4202
(R4202 IS ABBREVIATED TO R2.)

Hi-Fi AUDIO SECTION
NOTE: REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE: C.B.A.....R2, REF. NO. 4300 SERIES.
SCHEMATIC DIAGRAM...R4302
(R4302 IS ABBREVIATED TO R2.)


UDIO SIGNAL
PB AUDIO SIGNAL
TP4204 5.0
R4284 5600
R4285 47K
F.G.H J4301
I
(49) C2
(48) C2
R4301 560
R4302 22K
R4291 560 1/4W
D4281 MA4056-M (5.6V)
C4302 0.01
C4282 10/16V
VDD
VEE
C4281 M833M (OP AMP)
IC4301 CD4053BCM (INPUT SELECT)
REAR
FRONT
GND
TP4203 0
C4283 10/16V
J4302 F.G.H
R4283 5600
R4286 47K
C4301 0.01
R4305 33K
R4304 560
TP4205 0
R4287 560
R4288 560
TP4202
R4289 390
TP4201
R4290 390
Q4281 UN2215 (AUDIO MUTE)
Q4282 UN2215 (AUDIO MUTE)
C4352 10/16V
C4351 4.7/25V
R4355 1500
C4356 22/16V
C4355 0.01
L4351 100
ROOT COMPRESSOR
A/D CONVERTER
CLOCK CONTROL
VCC
GND
Q4351 UN2215 (LEVEL METER MUTE)
Q4352 UN2215 (LEVEL METER MUTE)
R4356 1500
C4354 10/16V
R4354 3900
C4353 4.7/25V
TP4351 5.0
TP4352 5.0
TP4353 5.0
R4294 10K
R4296 10K
R4295 10K
R4293 10K
Q4283 DTC144EK (INVERTER)
Q4284 DTC144EK (INVERTER)
(38) C4
(39) C3
(40) C3
(50) C5
(42) C1
(41) C2
(35) C5
(36) C3
(37) C3
D
E
F
G
H
I
J

PIN		TO Hi-Fi AUDIO
1	NORMAL AUDIO	P4201-1
2	UNSW +14V	P4201-2
3	NORMAL AUDIO	P4201-3
4	GND	P4201-4
5	AUDIO L CH	P4201-5
6	GND	P4201-6
7	AUDIO R CH	P4201-7

PIN		TO Hi-Fi AUDIO
8	Hi-Fi HEAD SW	P4202-8
9	Hi-Fi AUDIO MUTE (H)	P4202-9
10	Hi-Fi (H)/NORMAL (L)	P4202-10
11	INPUT SELECT 1	P4202-11
12	LINE AUDIO MUTE	P4202-12
13	PB Hi-Fi AUDIO (H)	P4202-13
14	VIDEO EE (H)	P4202-14

PIN		TO Hi-Fi AUDIO
15	PB AUDIO	P4203-15
16	GND	P4203-16
17	REC AUDIO	P4203-17
18		P4203-18
19	ENVELOPE	P4203-19
20	INPUT SELECT 2	P4203-20

PIN		TO Hi-Fi AUDIO
21	AUDIO R CH	P4204-21
22	GND	P4204-22
23	AUDIO L CH	P4204-23
24	GND	P4204-24

PIN		TO Hi-Fi AUDIO
25	GND	P4205-25
26	TUNER AUDIO R CH	P4205-26
27	GND	P4205-27
28	TUNER AUDIO LCH	P4205-28
29	GND	P4205-29
30	RF AUDIO	P4205-30

PIN		TO MTS/SAP
1	GND	P9001- 1
2	AUDIO DEFEAT (H)	P9001- 2
3	UNSW +5V (VIDEO)	P9001- 3
4	TUNER AUDIO	P9001- 4
5	SW +12V	P9001- 5
6	MAIN(H)/SAP(M)/MONO(L)	P9001- 6

PIN		TO MTS/SAP
7	MTS SIGNAL (L)	P9002- 7
8	SAP SIGNAL (L)	P9002- 8
9	TUNER AUDIO L CH	P9002- 9
10	GND	P9002- 10
11	TUNER AUDIO R CH	P9002- 11
12	GND	P9002- 12

COMPARISON CHART
OF MODELS & MARKS

MODEL	MARK
PV-4308	A
PV-4311	B
PV-4311-K	C
PV-4315S	D
PV-4325S	E
PV-4351	F
PV-4351-K	G
PV-4358	H
PV-4355S	I

AUDIO SECTION	
TRANSISTOR	
Q4281	F-2
Q4282	G-2
Q4283	G-1
Q4284	H-1
IC	
IC4281	C-2
TEST POINT	
TP4201	G-2
TP4202	G-3
TP4203	D-3
TP4204	D-5
TP4205	H-4

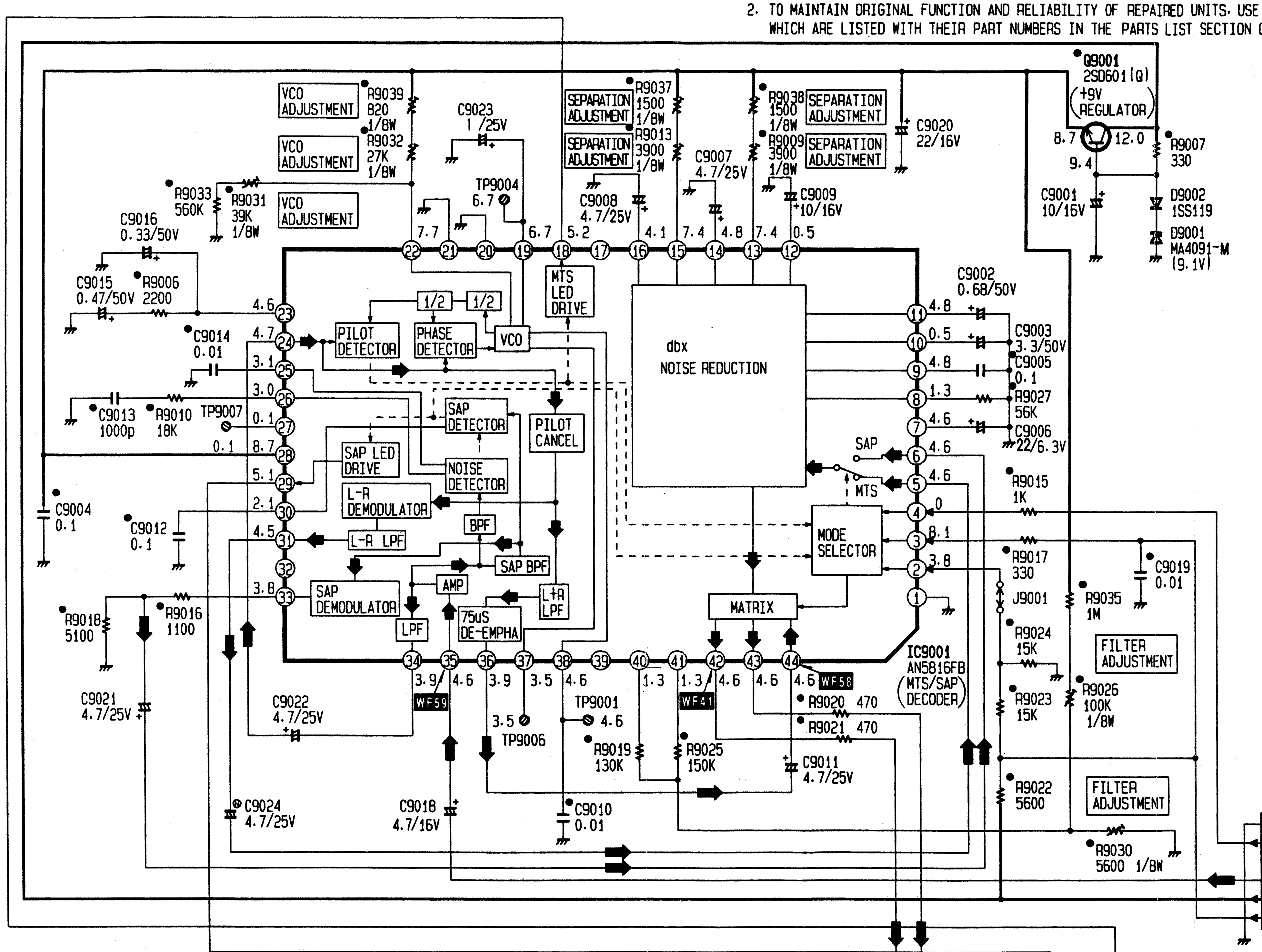
Hi-Fi AUDIO SECTION	
TRANSISTOR	
Q4351	E-2
Q4352	E-1
IC	
IC4301	F-4
IC4351	C-2
TEST POINT	
TP4351	D-1
TP4352	E-1
TP4353	E-1

UNLESS OTHERWISE SPECIFIED:
WATTAGE OF RESISTORS IS 1/10W.

F.G.H VJBS02198
I VJBS02201

MTS/SAP SCHEMATIC DIAGRAM (F)

NOTE:
1. DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST. AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.
2. TO MAINTAIN ORIGINAL FUNCTION AND RELIABILITY OF REPAIRED UNITS. USE ONLY ORIGINAL REPLACEMENT PARTS WHICH ARE LISTED WITH THEIR PART NUMBERS IN THE PARTS LIST SECTION OF THE SERVICE MANUAL.


5
4
3
2
1
VCO ADJUSTMENT
R9039 820 1/8W
R9032 27K 1/8W
C9023 1/25V
VCO ADJUSTMENT
R9033 560K
R9031 39K 1/8W
VCO ADJUSTMENT
C9016 0.33/50V
TP9004 6.7
C9015 0.47/50V
R9006 2200
C9014 0.01
C9013 1000p
R9010 18K
TP9007
C9004 0.1
C9012 0.1
R9018 5100
R9016 1100
C9021 4.7/25V
C9022 4.7/25V
C9024 4.7/25V
C9018 4.7/16V
SEPARATION ADJUSTMENT
R9037 1500 1/8W
SEPARATION ADJUSTMENT
R9013 3900 1/8W
C9007 4.7/25V
C9008 4.7/25V
R9038 1500 1/8W
SEPARATION ADJUSTMENT
R9009 3900 1/8W
SEPARATION ADJUSTMENT
C9009 10/16V
C9020 22/16V
Q9001 2SD601(Q) +9V REGULATOR
8.7
12.0
9.4
R9007 330
C9001 10/16V
D9002 1SS119
D9001 MA4091-M (9.1V)
1/2
1/2
PILOT DETECTOR
PHASE DETECTOR
VCO
MTS LED DRIVE
SAP DETECTOR
PILOT CANCEL
SAP LED DRIVE
NOISE DETECTOR
L-R DEMODULATOR
BPF
L-R LPF
SAP BPF
AMP
SAP DEMODULATOR
L+R LPF
75uS DE-EMPHA
LPF
dbx NOISE REDUCTION
MODE SELECTOR
MATRIX
SAP
MTS
IC9001 AN5816FB (MTS/SAP DECODER)
7.7
6.7
5.2
4.1
7.4
4.8
7.4
0.5
4.6
4.7
3.1
3.0
0.1
8.7
0.1
5.1
2.1
4.5
3.8
3.9
4.6
3.9
3.5
4.6
1.3
1.3
4.6
4.6
4.6
4.8
0.5
4.8
1.3
4.6
4.6
4.6
0
8.1
3.8
WF59
WF41
WF58
TP9001 4.6
3.5 TP9006
R9019 130K
R9025 150K
C9011 4.7/25V
C9010 0.01
R9020 470
R9021 470
C9002 0.68/50V
C9003 3.3/50V
C9005 0.1
R9027 56K
C9006 22/6.3V
R9015 1K
R9017 330
J9001
R9024 15K
R9023 15K
R9022 5600
R9035 1M
C9019 0.01
FILTER ADJUSTMENT
R9026 100K 1/8W
FILTER ADJUSTMENT
R9030 5600 1/8W
A
B
C
D
E
F
G

MTS/SAP	
TRANSISTOR	
Q9001	F-5
IC	
IC9001	E-2
CONNECTOR	
P9001	G-2
P9002	G-1
TEST POINT	
TP9001	C-2
TP9004	C-5
TP9006	C-2
TP9007	B-4
ADJUSTMENT	
R9009	D-5
R9013	D-5
R9026	F-3
R9030	F-2
R9031	B-5
R9032	C-5
R9037	D-5
R9038	D-5
R9039	C-5

P9001 **TO MAIN III**

1	GND	PIN- 1
2	AUDIO DEFEAT (H)	PIN- 2
3		PIN- 3
4	TUNER AUDIO	PIN- 4
5	SW +12V	PIN- 5
6	MAIN(H)/SAP(M)/MONO(L)	PIN- 6

P9002 **TO MAIN III**

7	MTS SIGNAL (L)	PIN- 7
8	SAP SIGNAL (L)	PIN- 8
9	TUNER AUDIO L CH	PIN- 9
10	GND	PIN- 10
11	TUNER AUDIO R CH	PIN- 11
12	GND	PIN- 12

TEST POINT INFORMATION
- ①: TEST POINT WITH A JUMPER WIRE ACROSS A HOLE IN THE P.C.B.
- ▭→: TEST POINT WITH A COMPONENT LEAD ON THE FOIL SIDE.
- ⊘: TEST POINT WITH NO TEST PIN.
- ●: TEST POINT WITH A TEST PIN.

NOTE: REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE: C.B.A....R2. REF. NO. 9000 SERIES.
SCHEMATIC DIAGRAM...R9002
(R9002 IS ABBREVIATED TO R2.)

NOTE:
THE FOLLOWING PARTS ON THE HEAD AMP ASS'Y ARE NOT SUPPLIED SEPARATELY.
PLEASE ORDER AND REPLACE WITH CIRCUIT BOARD ASSEMBLY INSTEAD OF INDIVIDUAL PARTS.
(IC9001, R9009, R9013, R9026, R9030, R9031, R9032, R9037, R9038, R9039)

NOTE:
THE PARTS MARKED "⩘" INDICATE THAT A TRIMMING ADJUSTMENT WAS MADE AT THE FACTORY.
DO NOT TRY TO READJUST THEM.

UNLESS OTHERWISE SPECIFIED:
WATTAGE OF RESISTORS IS 1/10W.

VJBS0915

MTS/SAP SCHEMATIC DIAGRAM (G, H, I)

NOTE: THE MARK "•" INDICATES LEADLESS (CHIP) COMPONENTS.

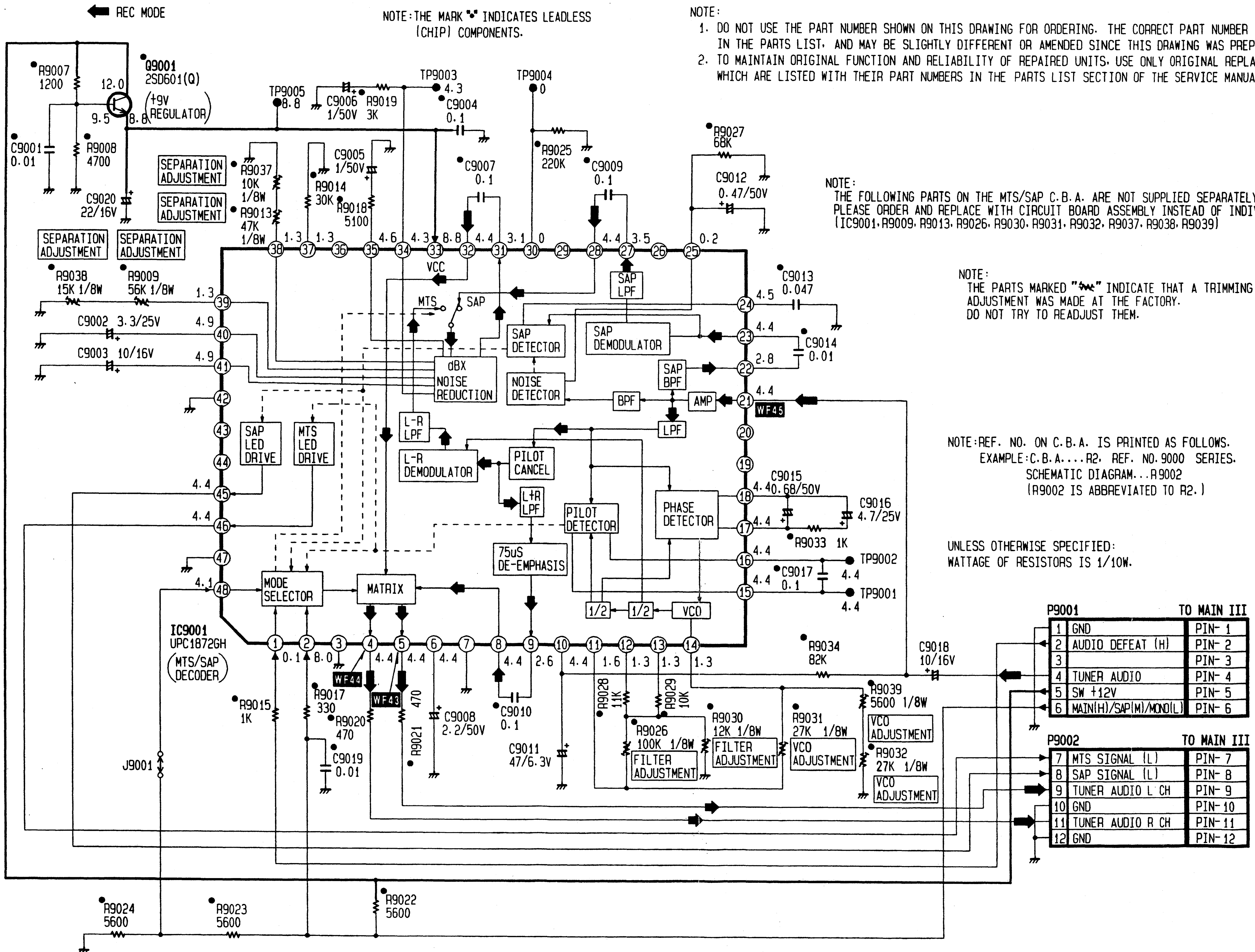
NOTE:
1. DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.
2. TO MAINTAIN ORIGINAL FUNCTION AND RELIABILITY OF REPAIRED UNITS, USE ONLY ORIGINAL REPLACEMENT PARTS WHICH ARE LISTED WITH THEIR PART NUMBERS IN THE PARTS LIST SECTION OF THE SERVICE MANUAL.

NOTE:
THE FOLLOWING PARTS ON THE MTS/SAP C.B.A. ARE NOT SUPPLIED SEPARATELY.
PLEASE ORDER AND REPLACE WITH CIRCUIT BOARD ASSEMBLY INSTEAD OF INDIVIDUAL PARTS.
(IC9001, R9009, R9013, R9026, R9030, R9031, R9032, R9037, R9038, R9039)

NOTE:
THE PARTS MARKED "⩳" INDICATE THAT A TRIMMING ADJUSTMENT WAS MADE AT THE FACTORY.
DO NOT TRY TO READJUST THEM.

NOTE: REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE: C.B.A....R2, REF. NO. 9000 SERIES.
SCHEMATIC DIAGRAM...R9002
(R9002 IS ABBREVIATED TO R2.)

UNLESS OTHERWISE SPECIFIED:
WATTAGE OF RESISTORS IS 1/10W.



REC MODE
R9007 1200
Q9001 2SD601(Q)
(+9V REGULATOR)
12.0
9.5
8.8
C9001 0.01
R9008 4700
C9020 22/16V
SEPARATION ADJUSTMENT
R9038 15K 1/8W
R9009 56K 1/8W
R9037 10K 1/8W
R9013 47K 1/8W
TP9005 8.8
C9006 1/50V
R9019 3K
TP9003 4.3
TP9004 0
C9004 0.1
C9005 1/50V
R9014 30K
R9018 5100
C9007 0.1
R9025 220K
C9009 0.1
R9027 68K
C9012 0.47/50V
C9013 0.047
C9014 0.01
C9002 3.3/25V
C9003 10/16V
VCC
MTS
SAP
SAP LPF
SAP DETECTOR
SAP DEMODULATOR
dBX NOISE REDUCTION
NOISE DETECTOR
SAP BPF
BPF
AMP
LPF
WF45
SAP LED DRIVE
MTS LED DRIVE
L-R LPF
L-R DEMODULATOR
PILOT CANCEL
L+R LPF
PILOT DETECTOR
PHASE DETECTOR
75uS DE-EMPHASIS
MODE SELECTOR
MATRIX
1/2
1/2
VCO
C9015 0.68/50V
C9016 4.7/25V
R9033 1K
TP9002
C9017 0.1
TP9001
IC9001 UPC1872GH (MTS/SAP DECODER)
WF44
WF43
R9015 1K
R9017 330
R9020 470
R9021 470
C9019 0.01
C9008 2.2/50V
C9010 0.1
C9011 47/6.3V
R9028 11K
R9029 10K
R9026 100K 1/8W
FILTER ADJUSTMENT
R9030 12K 1/8W
FILTER ADJUSTMENT
R9031 27K 1/8W
VCO ADJUSTMENT
R9034 82K
R9039 5600 1/8W
VCO ADJUSTMENT
R9032 27K 1/8W
VCO ADJUSTMENT
C9018 10/16V
J9001
R9024 5600
R9023 5600
R9022 5600
P9001 TO MAIN III
P9002 TO MAIN III

P9001 TO MAIN III

1	GND	PIN-1
2	AUDIO DEFEAT (H)	PIN-2
3		PIN-3
4	TUNER AUDIO	PIN-4
5	SW +12V	PIN-5
6	MAIN(H)/SAP(M)/MONO(L)	PIN-6

P9002 TO MAIN III

7	MTS SIGNAL (L)	PIN-7
8	SAP SIGNAL (L)	PIN-8
9	TUNER AUDIO L CH	PIN-9
10	GND	PIN-10
11	TUNER AUDIO R CH	PIN-11
12	GND	PIN-12

VJBS0914

R DERING. THE CORRECT PART NUMBER IS SHOWN
A NDED SINCE THIS DRAWING WAS PREPARED.
PAIRED UNITS, USE ONLY ORIGINAL REPLACEMENT PARTS
ITS IST SECTION OF THE SERVICE MANUAL.

AF .B.A. ARE NOT SUPPLIED SEPARATELY.
RC T BOARD ASSEMBLY INSTEAD OF INDIVIDUAL PARTS.
R 1, R9032, R9037, R9038, R9039)

MA ED "⩫" INDICATE THAT A TRIMMING
WAS MADE AT THE FACTORY.
T READJUST THEM.

C C.B.A. IS PRINTED AS FOLLOWS.
C. A....R2, REF. NO. 9000 SERIES.
SCHEMATIC DIAGRAM...R9002
(R 02 IS ABBREVIATED TO R2.)

IS SPECIFIED:
S ORS IS 1/10W.

COMPARISON CHART
OF MODELS & MARKS

MODEL	MARK
PV-4308	A
PV-4311	B
PV-4311-K	C
PV-4315S	D
PV-4325S	E
PV-4351	F
PV-4351-K	G
PV-4358	H
PV-4355S	I

MTS/SAP	
TRANSISTOR	
Q9001	B-5
IC	
IC9001	B-2
CONNECTOR	
P9001	F-2
P9002	F-2
TEST POINT	
TP9001	E-3
TP9002	E-3
TP9003	C-5
TP9004	C-5
TP9005	B-5
ADJUSTMENT	
R9009	B-4
R9013	B-4
R9026	D-2
R9030	D-2
R9031	E-2
R9032	E-2
R9037	B-5
R9038	A-4
R9039	E-2

P9001 TO MAIN III

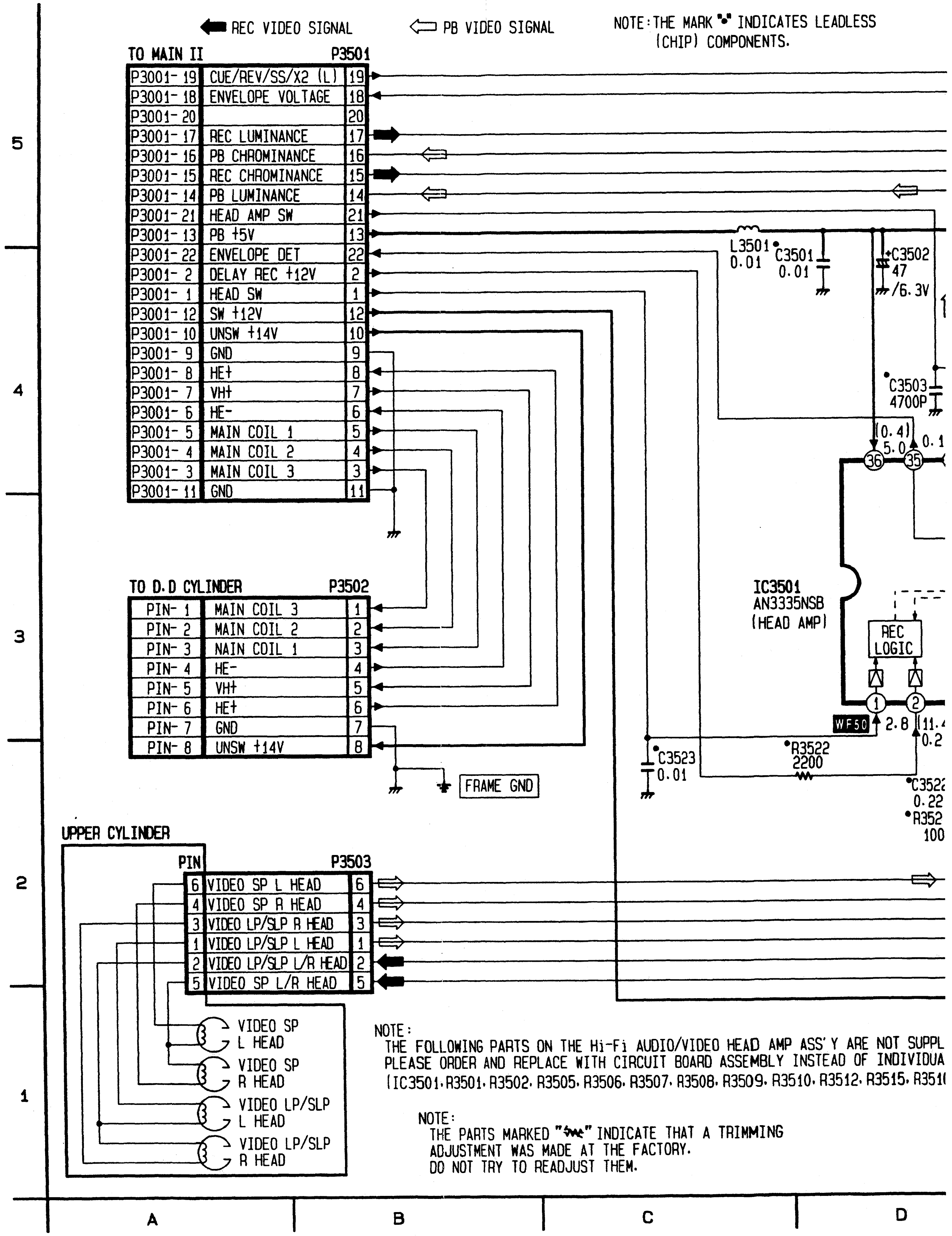
1	GND	PIN- 1
2	AUDIO DEFEAT (H)	PIN- 2
3		PIN- 3
4	TUNER AUDIO	PIN- 4
5	SW +12V	PIN- 5
6	MAIN(H)/SAP(M)/MONO(L)	PIN- 6

P9002 TO MAIN III

7	MTS SIGNAL (L)	PIN- 7
8	SAP SIGNAL (L)	PIN- 8
9	TUNER AUDIO L CH	PIN- 9
10	GND	PIN- 10
11	TUNER AUDIO R CH	PIN- 11
12	GND	PIN- 12

VJBS0914

HEAD AMP SCHEMATIC DIAGRAM (A, B, C,



◀ REC VIDEO SIGNAL ⇦ PB VIDEO SIGNAL

NOTE: THE MARK "•" INDICATES LEADLESS (CHIP) COMPONENTS.

TO MAIN II P3501

P3001- 19	CUE/REV/SS/X2 (L)	19
P3001- 18	ENVELOPE VOLTAGE	18
P3001- 20		20
P3001- 17	REC LUMINANCE	17
P3001- 16	PB CHROMINANCE	16
P3001- 15	REC CHROMINANCE	15
P3001- 14	PB LUMINANCE	14
P3001- 21	HEAD AMP SW	21
P3001- 13	PB +5V	13
P3001- 22	ENVELOPE DET	22
P3001- 2	DELAY REC +12V	2
P3001- 1	HEAD SW	1
P3001- 12	SW +12V	12
P3001- 10	UNSW +14V	10
P3001- 9	GND	9
P3001- 8	HE+	8
P3001- 7	VH+	7
P3001- 6	HE-	6
P3001- 5	MAIN COIL 1	5
P3001- 4	MAIN COIL 2	4
P3001- 3	MAIN COIL 3	3
P3001- 11	GND	11

TO D.D CYLINDER P3502

PIN- 1	MAIN COIL 3	1
PIN- 2	MAIN COIL 2	2
PIN- 3	NAIN COIL 1	3
PIN- 4	HE-	4
PIN- 5	VH+	5
PIN- 6	HE+	6
PIN- 7	GND	7
PIN- 8	UNSW +14V	8

UPPER CYLINDER P3503

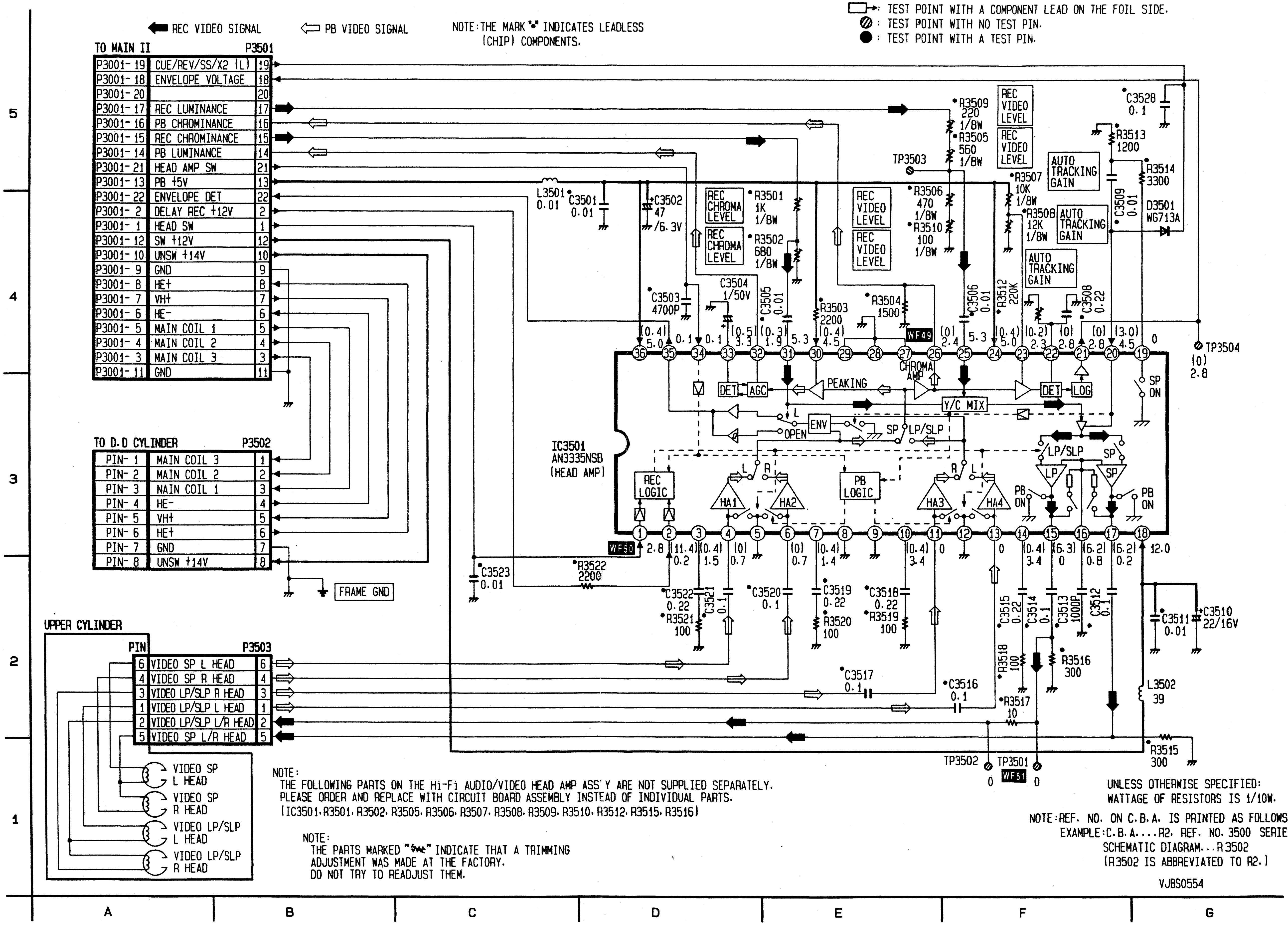
PIN		
6	VIDEO SP L HEAD	6
4	VIDEO SP R HEAD	4
3	VIDEO LP/SLP R HEAD	3
1	VIDEO LP/SLP L HEAD	1
2	VIDEO LP/SLP L/R HEAD	2
5	VIDEO SP L/R HEAD	5

NOTE:
THE FOLLOWING PARTS ON THE Hi-Fi AUDIO/VIDEO HEAD AMP ASS'Y ARE NOT SUPPL
PLEASE ORDER AND REPLACE WITH CIRCUIT BOARD ASSEMBLY INSTEAD OF INDIVIDUA
(IC3501, R3501, R3502, R3505, R3506, R3507, R3508, R3509, R3510, R3512, R3515, R351

NOTE:
THE PARTS MARKED "⩫" INDICATE THAT A TRIMMING
ADJUSTMENT WAS MADE AT THE FACTORY.
DO NOT TRY TO READJUST THEM.

HEAD AMP SCHEMATIC DIAGRAM (A, B, C, D, E)

TEST POINT INFORMATION
- Ⓘ : TEST POINT WITH A JUMPER WIRE ACROSS A HOLE IN THE P.C.B.
- ▭→ : TEST POINT WITH A COMPONENT LEAD ON THE FOIL SIDE.
- ⊘ : TEST POINT WITH NO TEST PIN.
- ● : TEST POINT WITH A TEST PIN.



◀ REC VIDEO SIGNAL
⇦ PB VIDEO SIGNAL
NOTE: THE MARK "•" INDICATES LEADLESS (CHIP) COMPONENTS.
TO MAIN II
P3501
P3001-19 CUE/REV/SS/X2 (L) 19
P3001-18 ENVELOPE VOLTAGE 18
P3001-20 20
P3001-17 REC LUMINANCE 17
P3001-16 PB CHROMINANCE 16
P3001-15 REC CHROMINANCE 15
P3001-14 PB LUMINANCE 14
P3001-21 HEAD AMP SW 21
P3001-13 PB +5V 13
P3001-22 ENVELOPE DET 22
P3001-2 DELAY REC +12V 2
P3001-1 HEAD SW 1
P3001-12 SW +12V 12
P3001-10 UNSW +14V 10
P3001-9 GND 9
P3001-8 HE+ 8
P3001-7 VH+ 7
P3001-6 HE- 6
P3001-5 MAIN COIL 1 5
P3001-4 MAIN COIL 2 4
P3001-3 MAIN COIL 3 3
P3001-11 GND 11
TO D.D CYLINDER
P3502
PIN-1 MAIN COIL 3 1
PIN-2 MAIN COIL 2 2
PIN-3 NAIN COIL 1 3
PIN-4 HE- 4
PIN-5 VH+ 5
PIN-6 HE+ 6
PIN-7 GND 7
PIN-8 UNSW +14V 8
FRAME GND
UPPER CYLINDER
PIN
P3503
6 VIDEO SP L HEAD 6
4 VIDEO SP R HEAD 4
3 VIDEO LP/SLP R HEAD 3
1 VIDEO LP/SLP L HEAD 1
2 VIDEO LP/SLP L/R HEAD 2
5 VIDEO SP L/R HEAD 5
VIDEO SP L HEAD
VIDEO SP R HEAD
VIDEO LP/SLP L HEAD
VIDEO LP/SLP R HEAD
L3501 0.01
C3501 0.01
C3502 47 /6.3V
C3503 4700P
C3504 1/50V
C3505 0.01
REC CHROMA LEVEL
REC CHROMA LEVEL
R3501 1K 1/8W
R3502 680 1/8W
R3503 2200
REC VIDEO LEVEL
REC VIDEO LEVEL
R3504 1500
WF49
R3506 470 1/8W
R3510 100 1/8W
R3509 220 1/8W
R3505 560 1/8W
REC VIDEO LEVEL
REC VIDEO LEVEL
TP3503
C3506 0.01
R3512 220K
R3507 10K 1/8W
R3508 12K 1/8W
AUTO TRACKING GAIN
AUTO TRACKING GAIN
AUTO TRACKING GAIN
C3508 0.22
C3509 0.01
C3528 0.1
R3513 1200
R3514 3300
D3501 WG713A
TP3504 (0) 2.8
(0.4) 5.0
0.1
0.1
(0.5) 3.3
(0.3) 1.9
5.3
(0.4) 4.5
(0) 2.4
5.3
(0.4) 5.0
(0.2) 2.3
(0) 2.8
(0) 2.8
(3.0) 4.5
0
36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19
DET AGC PEAKING CHROMA AMP Y/C MIX DET LOG
SP ON
L OPEN ENV SP LP/SLP
LP/SLP SP LP SP
IC3501 AN3335NSB (HEAD AMP)
REC LOGIC
HA1 HA2 L R
PB LOGIC
HA3 HA4 R L
PB ON
PB ON
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
WF50
2.8
(11.4) 0.2
(0.4) 1.5
(0) 0.7
(0) 0.7
(0.4) 1.4
(0.4) 3.4
0
0
(0.4) 3.4
(6.3) 0
(6.2) 0.8
(6.2) 0.2
12.0
C3523 0.01
R3522 2200
C3522 0.22
R3521 100
C3521 0.1
C3520 0.1
C3519 0.22
R3520 100
C3518 0.22
R3519 100
C3515 0.22
C3514 0.1
C3513 1000P
C3512 0.1
C3511 0.01
C3510 22/16V
R3518 100
R3516 300
C3517 0.1
C3516 0.1
R3517 10
L3502 39
R3515 300
TP3502 0
TP3501 WF51 0
A B C D E F G
1 2 3 4 5

NOTE:
THE FOLLOWING PARTS ON THE Hi-Fi AUDIO/VIDEO HEAD AMP ASS'Y ARE NOT SUPPLIED SEPARATELY.
PLEASE ORDER AND REPLACE WITH CIRCUIT BOARD ASSEMBLY INSTEAD OF INDIVIDUAL PARTS.
(IC3501, R3501, R3502, R3505, R3506, R3507, R3508, R3509, R3510, R3512, R3515, R3516)

NOTE:
THE PARTS MARKED "⏦" INDICATE THAT A TRIMMING ADJUSTMENT WAS MADE AT THE FACTORY.
DO NOT TRY TO READJUST THEM.

UNLESS OTHERWISE SPECIFIED:
WATTAGE OF RESISTORS IS 1/10W.

NOTE: REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE: C.B.A.... R2. REF. NO. 3500 SERIES.
SCHEMATIC DIAGRAM... R3502
(R3502 IS ABBREVIATED TO R2.)

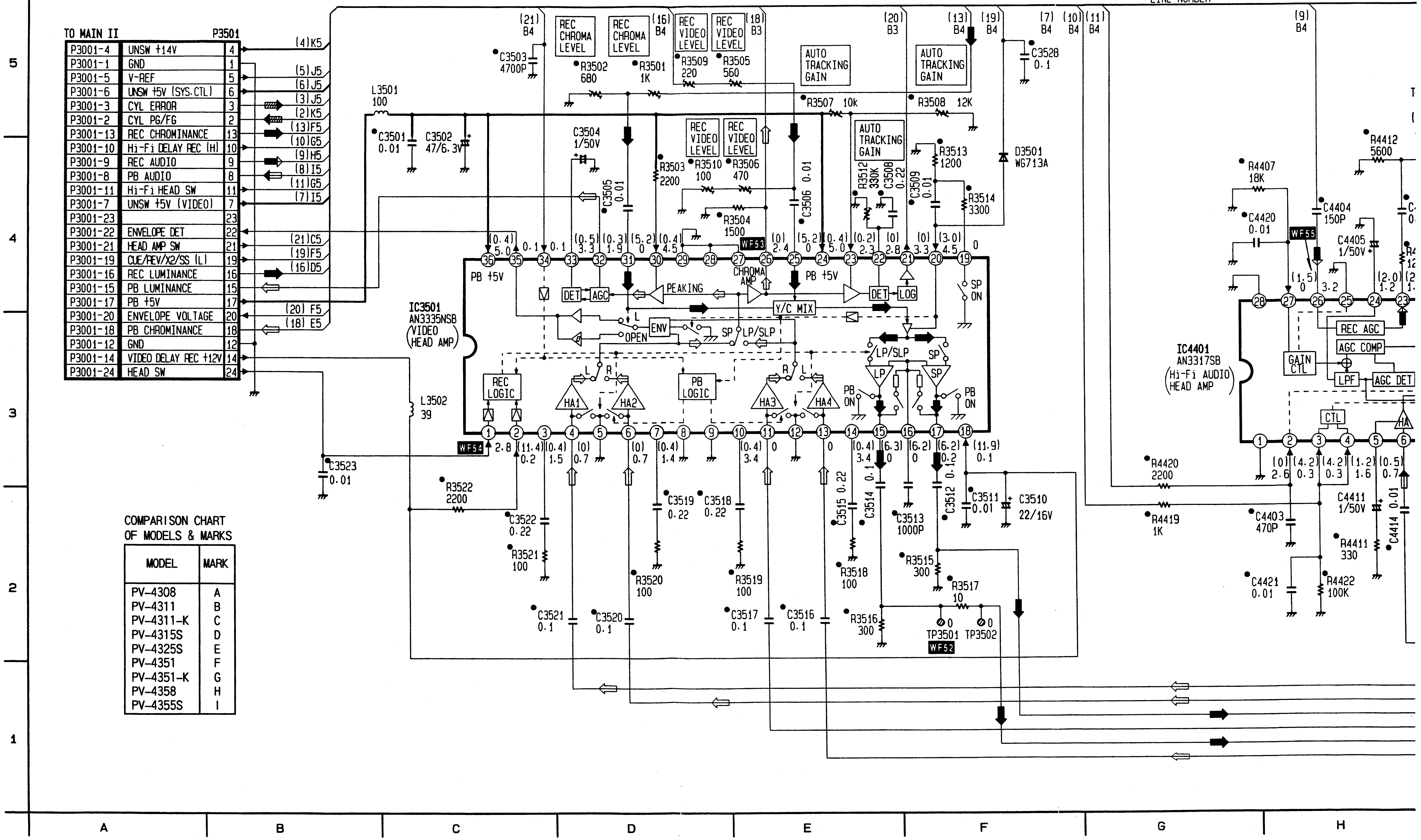
VJBS0554

Hi-Fi AUDIO/VIDEO HEAD AMP SCHEMATIC DIAGRAM(F, G, H, I)

◀ REC VIDEO SIGNAL ⇦ PB VIDEO SIGNAL ◀ REC AUDIO SIGNAL ⇦ PB AUDIO SIGNAL ▨ CYLINDER SERVO

NOTE: THE MARK "•" INDICATES LEADLESS (CHIP) COMPONENTS.

NOTE: HOW TO READ CONVERGED LINES
(100) B4
LOCATION GRID NUMBER OF THE OTHER END OF THE LINE
LINE NUMBER



TO MAIN II
P3501
P3001-4 UNSW +14V 4
P3001-1 GND 1
P3001-5 V-REF 5
P3001-6 UNSW +5V (SYS.CTL) 6
P3001-3 CYL ERROR 3
P3001-2 CYL PG/FG 2
P3001-13 REC CHROMINANCE 13
P3001-10 Hi-Fi DELAY REC (H) 10
P3001-9 REC AUDIO 9
P3001-8 PB AUDIO 8
P3001-11 Hi-Fi HEAD SW 11
P3001-7 UNSW +5V (VIDEO) 7
P3001-23 23
P3001-22 ENVELOPE DET 22
P3001-21 HEAD AMP SW 21
P3001-19 CUE/REV/X2/SS (L) 19
P3001-16 REC LUMINANCE 16
P3001-15 PB LUMINANCE 15
P3001-17 PB +5V 17
P3001-20 ENVELOPE VOLTAGE 20
P3001-18 PB CHROMINANCE 18
P3001-12 GND 12
P3001-14 VIDEO DELAY REC +12V 14
P3001-24 HEAD SW 24
(4)K5
(5)J5
(6)J5
(3)J5
(2)K5
(13)F5
(10)G5
(9)H5
(8)I5
(11)G5
(7)I5
(21)C5
(19)F5
(16)D5
(20) F5
(18) E5
L3501 100
C3501 0.01
C3502 47/6.3V
C3503 4700P
REC CHROMA LEVEL
REC CHROMA LEVEL
REC VIDEO LEVEL
REC VIDEO LEVEL
R3502 680
R3501 1K
R3509 220
R3505 560
C3504 1/50V
C3505 0.01
R3503 2200
R3510 100
R3506 470
R3504 1500
C3506 0.01
AUTO TRACKING GAIN
R3507 10k
R3508 12K
R3512 330K
C3508 0.22
C3509 0.01
R3513 1200
R3514 3300
D3501 WG713A
C3528 0.1
PB +5V
PEAKING
CHROMA AMP
DET AGC
Y/C MIX
DET LOG
SP ON
ENV
OPEN
SP LP/SLP
LP/SLP SP
LP SP
REC LOGIC
PB LOGIC
HA1 HA2 HA3 HA4
PB ON
IC3501 AN3335NSB (VIDEO HEAD AMP)
L3502 39
C3523 0.01
WF54
WF53
WF55
WF52
R3522 2200
C3522 0.22
R3521 100
C3521 0.1
C3520 0.1
R3520 100
C3519 0.22
C3518 0.22
R3519 100
C3517 0.1
C3516 0.1
C3515 0.22
C3514 0.1
R3518 100
R3516 300
C3513 1000P
C3512 0.1
R3515 300
R3517 10
C3511 0.01
C3510 22/16V
TP3501 TP3502
R4412 5600
R4407 18K
C4420 0.01
C4404 150P
C4405 1/50V
IC4401 AN3317SB (Hi-Fi AUDIO HEAD AMP)
REC AGC
AGC COMP
GAIN CTL
LPF
AGC DET
CTL
R4420 2200
R4419 1K
C4403 470P
C4411 1/50V
R4411 330
C4414 0.01
C4421 0.01
R4422 100K

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-4308	A
PV-4311	B
PV-4311-K	C
PV-4315S	D
PV-4325S	E
PV-4351	F
PV-4351-K	G
PV-4358	H
PV-4355S	I

VE..ED LINES

IO GRID NUMBER OF THE OTHER END OF THE LINE
NU ER

NOTE:
1. DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST. AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.
2. TO MAINTAIN ORIGINAL FUNCTION AND RELIABILITY OF REPAIRED UNITS, USE ONLY ORIGINAL REPLACEMENT PARTS WHICH ARE LISTED WITH THEIR PART NUMBERS IN THE PARTS LIST SECTION OF THE SERVICE MANUAL.

NOTE:
THE FOLLOWING PARTS ON THE Hi-Fi AUDIO/VIDEO HEAD AMP ASS'Y ARE NOT SUPPLIED SEPARATELY.
PLEASE ORDER AND REPLACE WITH CIRCUIT BOARD ASSEMBLY INSTEAD OF INDIVIDUAL PARTS.
(IC3501, R3501, R3502, R3505, R3506, R3507, R3508, R3509, R3510, R3512, R3515, R3516)

NOTE:
THE PARTS MARKED "⩫" INDICATE THAT A TRIMMING ADJUSTMENT WAS MADE AT THE FACTORY.
DO NOT TRY TO READJUST THEM.

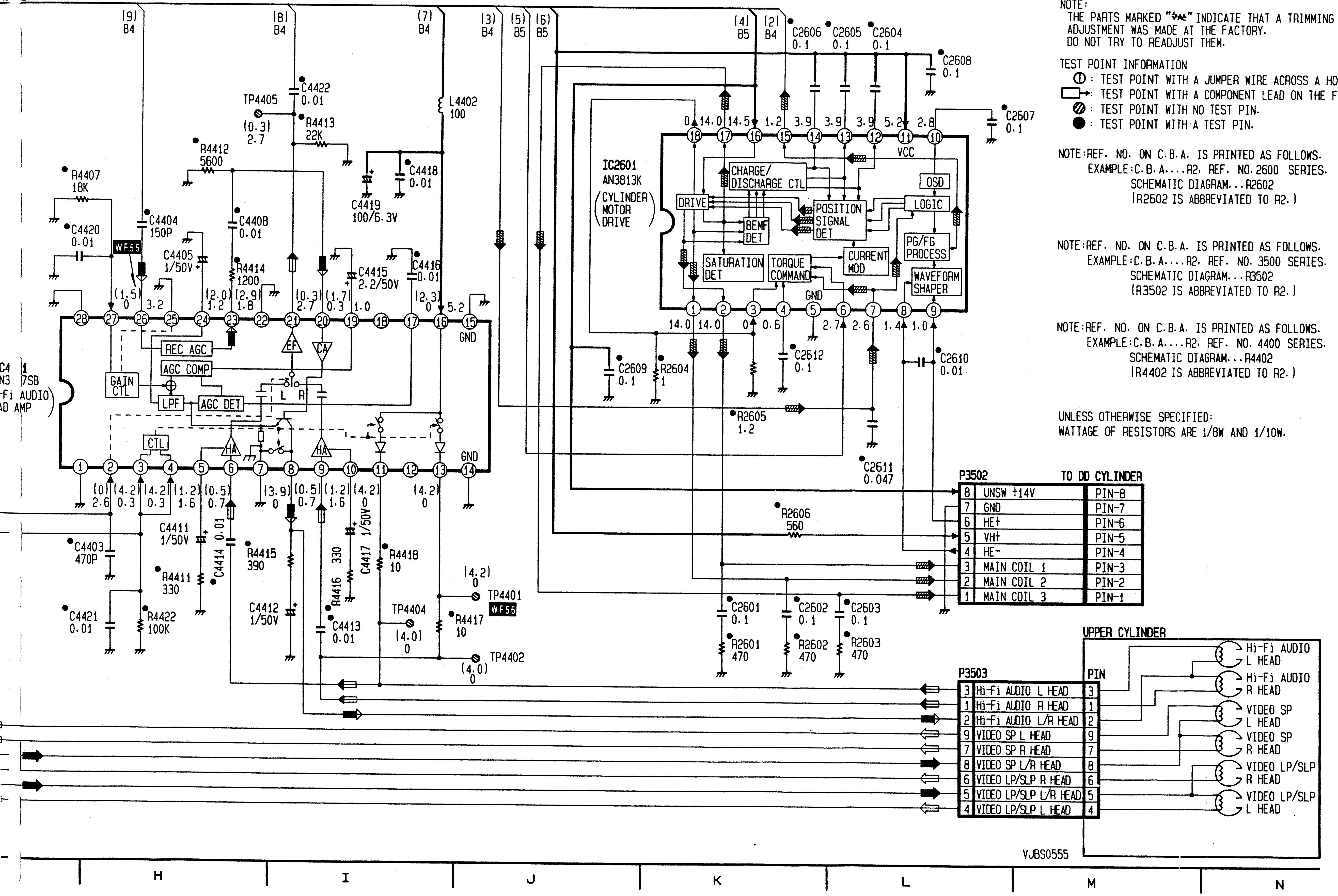
TEST POINT INFORMATION
- ⦶ : TEST POINT WITH A JUMPER WIRE ACROSS A HOLE IN THE P.C.B.
- ▭→ : TEST POINT WITH A COMPONENT LEAD ON THE FOIL SIDE.
- ⊘ : TEST POINT WITH NO TEST PIN.
- ● : TEST POINT WITH A TEST PIN.

NOTE: REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE: C.B.A.....R2, REF. NO. 2600 SERIES.
SCHEMATIC DIAGRAM...R2602
(R2602 IS ABBREVIATED TO R2.)

NOTE: REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE: C.B.A.....R2, REF. NO. 3500 SERIES.
SCHEMATIC DIAGRAM...R3502
(R3502 IS ABBREVIATED TO R2.)

NOTE: REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE: C.B.A.....R2, REF. NO. 4400 SERIES.
SCHEMATIC DIAGRAM...R4402
(R4402 IS ABBREVIATED TO R2.)

UNLESS OTHERWISE SPECIFIED:
WATTAGE OF RESISTORS ARE 1/8W AND 1/10W.


(9) B4
(8) B4
(7) B4
(3) B4
(5) B5
(6) B5
(4) B5
(2) B4
C2606 0.1
C2605 0.1
C2604 0.1
C2608 0.1
C2607 0.1
TP4405
(0.3) 2.7
C4422 0.01
R4413 22K
L4402 100
R4412 5600
R4407 18K
C4418 0.01
C4419 100/6.3V
C4420 0.01
C4404 150P
C4408 0.01
WF55
C4405 1/50V
R4414 1200
C4415 2.2/50V
C4416 0.01
IC2601
AN3813K
(CYLINDER MOTOR DRIVE)
CHARGE/ DISCHARGE CTL
DRIVE
BEMF DET
POSITION SIGNAL DET
SATURATION DET
TORQUE COMMAND
CURRENT MOD
OSD
LOGIC
PG/FG PROCESS
WAVEFORM SHAPER
VCC
GND
C2609 0.1
R2604 1
C2612 0.1
C2610 0.01
R2605 1.2
C2611 0.047
REC AGC
AGC COMP
GAIN CTL
LPF
AGC DET
EF
CA
HA
CTL
L
R
GND
C4
N3 7SB
-Fi AUDIO
D AMP
C4403 470P
C4411 1/50V
C4414 0.01
R4415 390
R4416 330
C4417 1/50V
R4418 10
R4411 330
C4421 0.01
R4422 100K
C4412 1/50V
C4413 0.01
TP4404
(4.0) 0
TP4401
WF56
R4417 10
TP4402
(4.0) 0
R2606 560
C2601 0.1
C2602 0.1
C2603 0.1
R2601 470
R2602 470
R2603 470
P3502
TO DD CYLINDER
8 UNSW +14V PIN-8
7 GND PIN-7
6 HE+ PIN-6
5 VH+ PIN-5
4 HE- PIN-4
3 MAIN COIL 1 PIN-3
2 MAIN COIL 2 PIN-2
1 MAIN COIL 3 PIN-1
P3503
UPPER CYLINDER
PIN
3 Hi-Fi AUDIO L HEAD 3
1 Hi-Fi AUDIO R HEAD 1
2 Hi-Fi AUDIO L/R HEAD 2
9 VIDEO SP L HEAD 9
7 VIDEO SP R HEAD 7
8 VIDEO SP L/R HEAD 8
6 VIDEO LP/SLP R HEAD 6
5 VIDEO LP/SLP L/R HEAD 5
4 VIDEO LP/SLP L HEAD 4
Hi-Fi AUDIO L HEAD
Hi-Fi AUDIO R HEAD
VIDEO SP L HEAD
VIDEO SP R HEAD
VIDEO LP/SLP R HEAD
VIDEO LP/SLP L HEAD
VJBS0555
H
I
J
K
L
M
N

CYLINDER DRIVE SECTION	
IC	
IC2601	J-4

HEAD AMP SECTION	
IC	
IC3501	C-4
CONNECTOR	
P3501	B-5
P3502	L-3
P3503	L-2
TEST POINT	
TP3501	F-2
TP3502	F-2
ADJUSTMENT	
R3501	D-5
R3502	D-5
R3505	E-5
R3506	E-4
R3507	E-5
R3508	F-5
R3509	D-5
R3510	D-4
R3512	E-4

Hi-Fi AUDIO HEAD AMP SECTION	
IC	
IC4401	G-3
TEST POINT	
TP4401	J-2
TP4402	J-2
TP4404	I-5
TP4405	H-5

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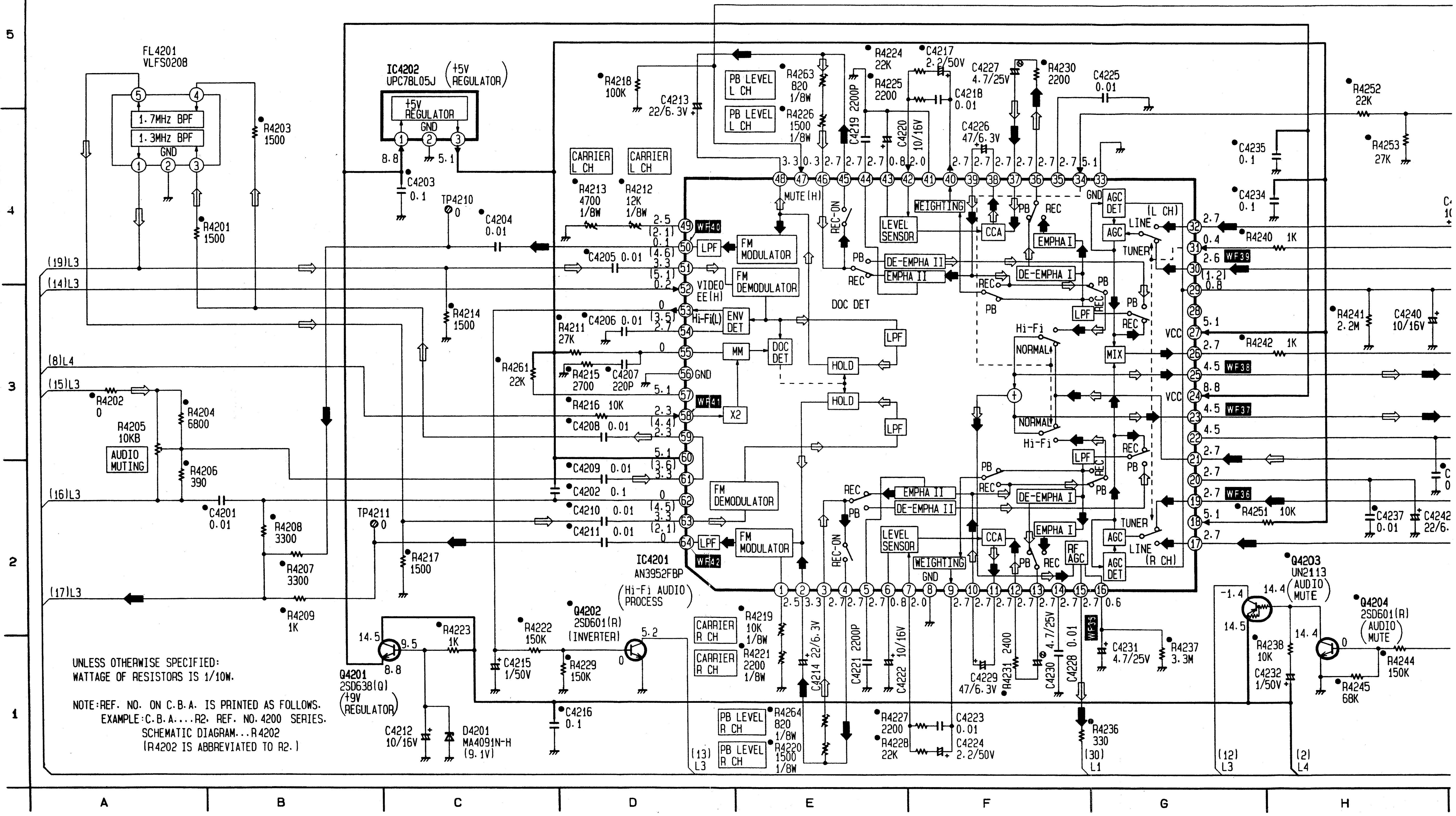
Hi-Fi AUDIO SCHEMATIC DIAGRAM (F, G, H, I)

NOTE: HOW TO READ CONVERGED LINES
(100) B4
LOCATION GRID NUMBER OF THE OTHER END OF THE LINE
LINE NUMBER

NOTE: THE MARK "•" INDICATES LEADLESS (CHIP) COMPONENTS.

NOTE:
1. DO NOT USE THE PART NUMBER SH
IN THE PARTS LIST, AND MAY BE
2. TO MAINTAIN ORIGINAL FUNCTION
WHICH ARE LISTED WITH THEIR F


REC MODE
PB MODE
FL4201
VLFS0208
1.7MHz BPF
1.3MHz BPF
GND
IC4202
UPC78L05J
(+5V REGULATOR)
+5V REGULATOR
TP4210
TP4211
IC4201
AN3952FBP
(Hi-Fi AUDIO PROCESS)
Q4201
2SD638(Q)
(+9V REGULATOR)
Q4202
2SD601(R)
(INVERTER)
Q4203
UN2113
(AUDIO MUTE)
Q4204
2SD601(R)
(AUDIO MUTE)
D4201
MA4091N-H
(9.1V)
AUDIO MUTING
CARRIER L CH
CARRIER R CH
PB LEVEL L CH
PB LEVEL R CH
FM MODULATOR
FM DEMODULATOR
ENV DET
DOC DET
MM
X2
HOLD
LPF
LEVEL SENSOR
WEIGHTING
CCA
DE-EMPHA II
EMPHA II
DE-EMPHA I
EMPHA I
AGC
AGC DET
RF AGC
MIX
LINE
TUNER
NORMAL
Hi-Fi
MUTE(H)
VIDEO EE(H)
Hi-Fi(L)
REC-ON
VCC
(L CH)
(R CH)
WF36
WF37
WF38
WF39
WF40
WF41
WF42
WF35
(19)L3
(14)L3
(8)L4
(15)L3
(16)L3
(17)L3
(13) L3
(30) L1
(12) L3
(2) L4
A
B
C
D
E
F
G
H
1
2
3
4
5

UNLESS OTHERWISE SPECIFIED:
WATTAGE OF RESISTORS IS 1/10W.

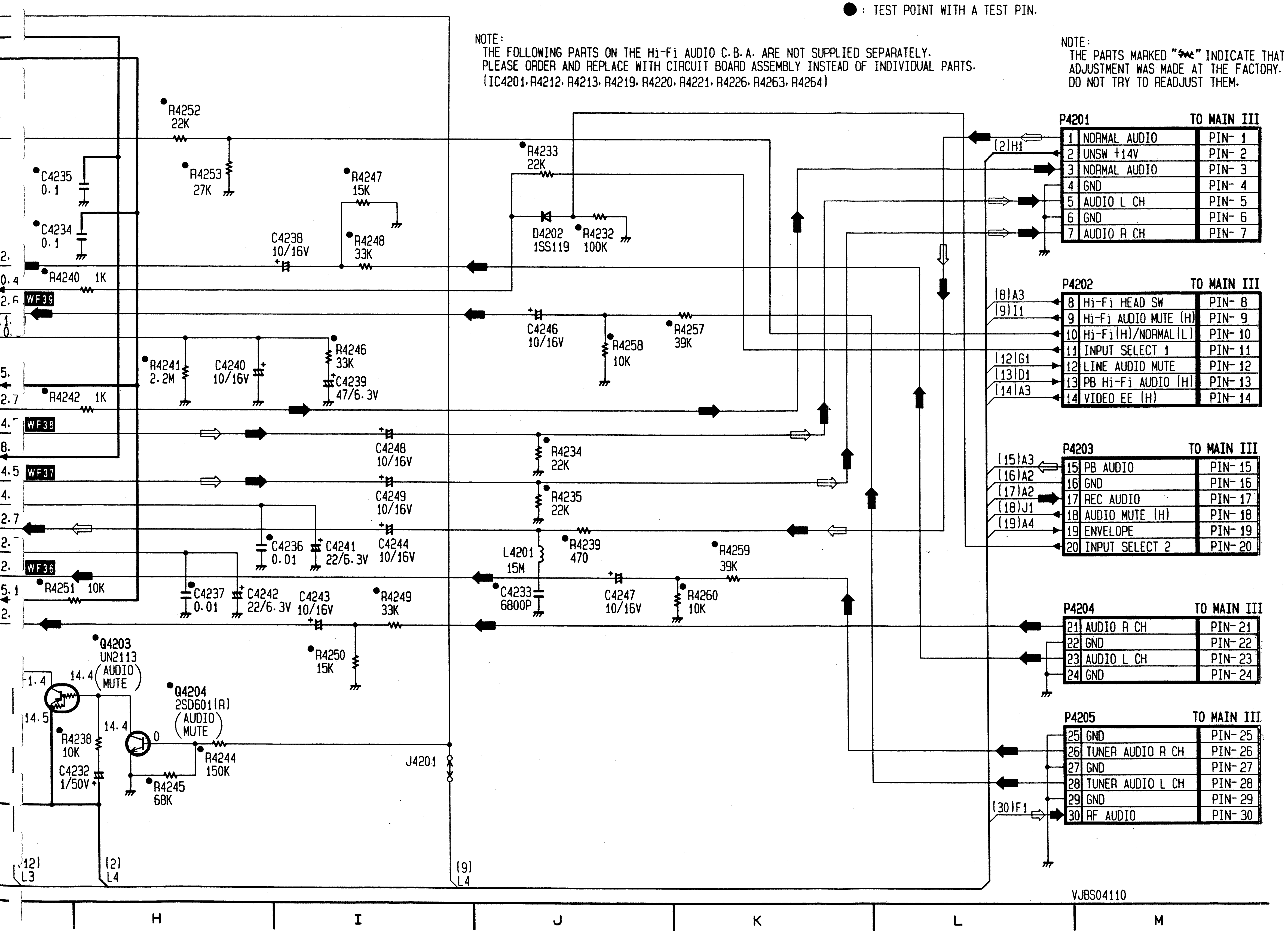
NOTE: REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE: C.B.A....R2, REF. NO. 4200 SERIES.
SCHEMATIC DIAGRAM...R4202
(R4202 IS ABBREVIATED TO R2.)

NOTE:

1. DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.
2. TO MAINTAIN ORIGINAL FUNCTION AND RELIABILITY OF REPAIRED UNITS, USE ONLY ORIGINAL REPLACEMENT PARTS WHICH ARE LISTED WITH THEIR PART NUMBERS IN THE PARTS LIST SECTION OF THE SERVICE MANUAL.

TEST POINT INFORMATION

- ⏀ : TEST POINT WITH A JUMPER WIRE ACROSS A HOLE IN THE P.C.B.
- ▭→ : TEST POINT WITH A COMPONENT LEAD ON THE FOIL SIDE.
- ⊘ : TEST POINT WITH NO TEST PIN.
- ● : TEST POINT WITH A TEST PIN.



NOTE:
THE FOLLOWING PARTS ON THE Hi-Fi AUDIO C.B.A. ARE NOT SUPPLIED SEPARATELY.
PLEASE ORDER AND REPLACE WITH CIRCUIT BOARD ASSEMBLY INSTEAD OF INDIVIDUAL PARTS.
(IC4201, R4212, R4213, R4219, R4220, R4221, R4226, R4263, R4264)

NOTE:
THE PARTS MARKED "〰" INDICATE THAT A TRIMMING ADJUSTMENT WAS MADE AT THE FACTORY.
DO NOT TRY TO READJUST THEM.

R4252 22K
R4253 27K
C4235 0.1
C4234 0.1
R4240 1K
WF39
C4238 10/16V
R4247 15K
R4248 33K
R4233 22K
D4202 1SS119
R4232 100K
C4246 10/16V
R4258 10K
R4257 39K
R4241 2.2M
C4240 10/16V
R4246 33K
C4239 47/6.3V
R4242 1K
WF38
WF37
C4248 10/16V
C4249 10/16V
R4234 22K
R4235 22K
C4236 0.01
C4241 22/6.3V
C4244 10/16V
L4201 15M
R4239 470
R4259 39K
WF36
R4251 10K
C4237 0.01
C4242 22/6.3V
C4243 10/16V
R4249 33K
C4233 6800P
C4247 10/16V
R4260 10K
R4250 15K
Q4203 UN2113 (AUDIO MUTE)
14.4
14.5
R4238 10K
C4232 1/50V
Q4204 2SD601(R) (AUDIO MUTE)
0
R4244 150K
R4245 68K
J4201
(12) L3
(2) L4
(9) L4
(2)H1
(8)A3
(9)I1
(12)G1
(13)D1
(14)A3
(15)A3
(16)A2
(17)A2
(18)J1
(19)A4
(30)F1
P4201 TO MAIN III
1 NORMAL AUDIO PIN- 1
2 UNSW +14V PIN- 2
3 NORMAL AUDIO PIN- 3
4 GND PIN- 4
5 AUDIO L CH PIN- 5
6 GND PIN- 6
7 AUDIO R CH PIN- 7
P4202 TO MAIN III
8 Hi-Fi HEAD SW PIN- 8
9 Hi-Fi AUDIO MUTE (H) PIN- 9
10 Hi-Fi(H)/NORMAL(L) PIN- 10
11 INPUT SELECT 1 PIN- 11
12 LINE AUDIO MUTE PIN- 12
13 PB Hi-Fi AUDIO (H) PIN- 13
14 VIDEO EE (H) PIN- 14
P4203 TO MAIN III
15 PB AUDIO PIN- 15
16 GND PIN- 16
17 REC AUDIO PIN- 17
18 AUDIO MUTE (H) PIN- 18
19 ENVELOPE PIN- 19
20 INPUT SELECT 2 PIN- 20
P4204 TO MAIN III
21 AUDIO R CH PIN- 21
22 GND PIN- 22
23 AUDIO L CH PIN- 23
24 GND PIN- 24
P4205 TO MAIN III
25 GND PIN- 25
26 TUNER AUDIO R CH PIN- 26
27 GND PIN- 27
28 TUNER AUDIO L CH PIN- 28
29 GND PIN- 29
30 RF AUDIO PIN- 30
VJBS04110
H
I
J
K
L
M

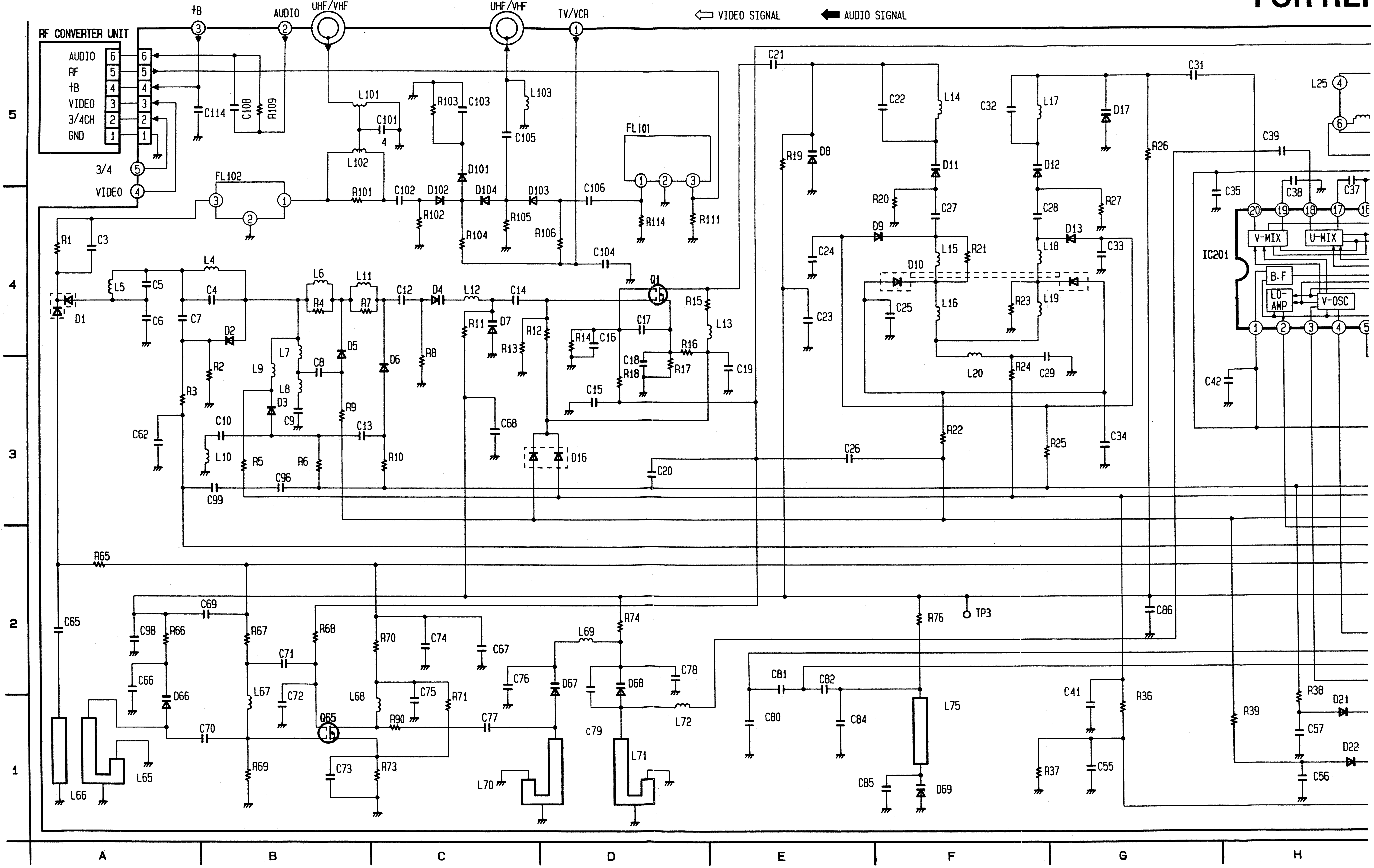
COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-4308	A
PV-4311	B
PV-4311-K	C
PV-4315S	D
PV-4325S	E
PV-4351	F
PV-4351-K	G
PV-4358	H
PV-4355S	I

Hi-Fi AUDIO	
TRANSISTOR	
Q4201	B-1
Q4202	D-2
Q4203	H-2
Q4204	H-2
IC	
IC4201	D-2
IC4202	C-5
CONNECTOR	
P4201	M-5
P4202	M-4
P4203	M-3
P4204	M-2
P4205	M-2
TEST POINT	
TP4210	C-4
TP4211	B-2
ADJUSTMENT	
R4205	M-2

UHF/VHF TUNER/TV DEMODULATOR SCHEMATIC DIAGRAM (A, B, C, D, E)

"FOR REF



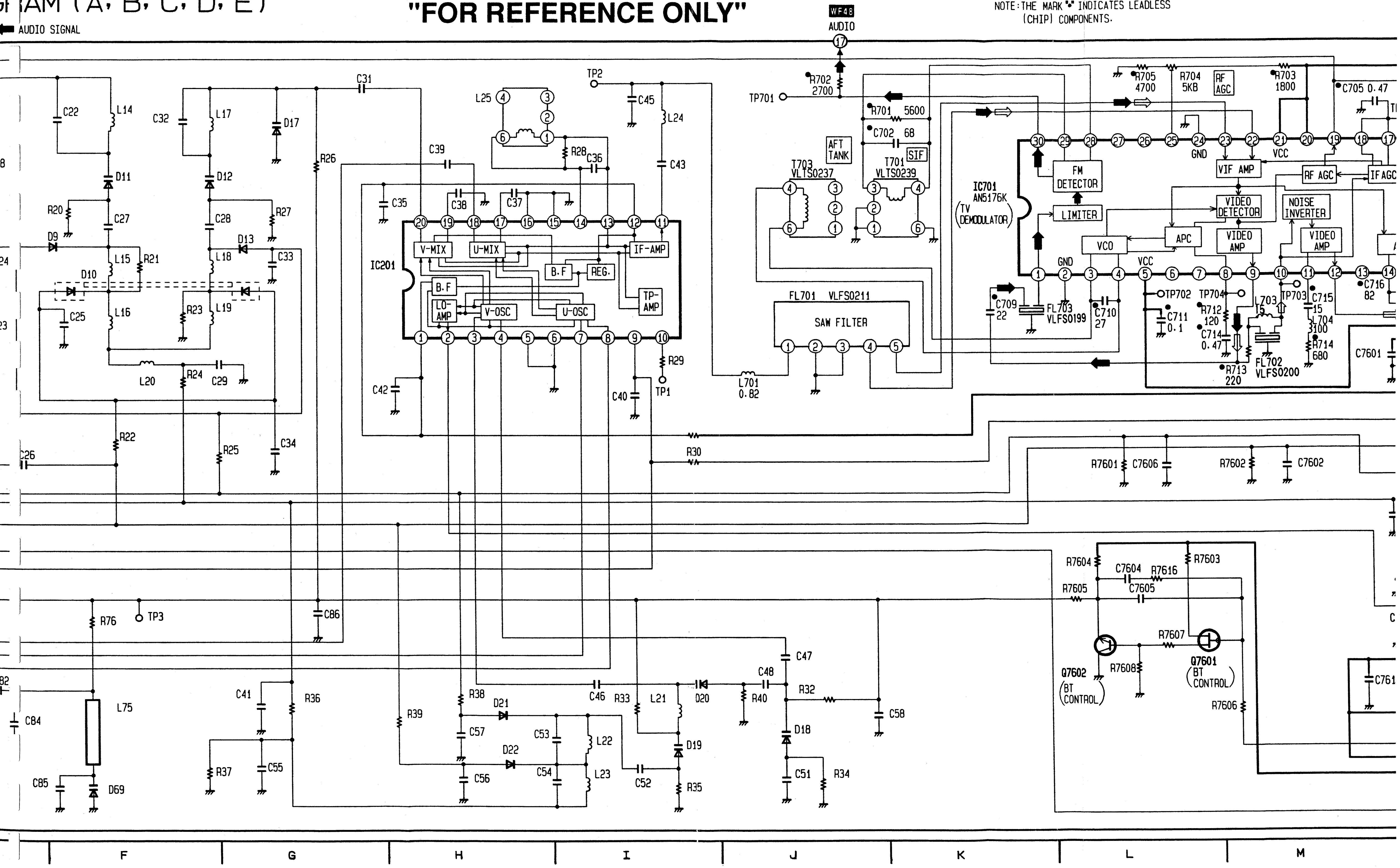
VIDEO SIGNAL
AUDIO SIGNAL
+B
AUDIO
UHF/VHF
UHF/VHF
TV/VCR
RF CONVERTER UNIT
AUDIO
RF
+B
VIDEO
3/4CH
GND
3/4
VIDEO
C114
C108
R109
L101
C101
L102
R103
C103
L103
C105
D101
FL101
FL102
R101
C102
D102
R102
D104
D103
R104
R105
R106
C106
R114
R111
C104
Q1
R1
C3
D1
L5
C5
C6
L4
C4
C7
D2
R2
R3
L6
R4
L11
R7
C12
D4
L12
C14
R11
D7
R13
R12
R14
C16
C17
R15
L13
R16
C18
R18
R17
C19
C15
L7
L9
L8
D3
C8
D5
C9
D6
R8
R9
C10
C13
R10
C62
L10
R5
R6
C96
C99
C68
D16
C20
C21
R19
D8
C24
C23
C22
L14
D11
R20
C27
D9
L15
R21
D10
C25
L16
C26
R22
L20
R24
C29
C32
L17
D17
D12
C28
R27
D13
C33
L18
R23
L19
C34
R25
C31
R26
C39
C35
C38
C37
L25
IC201
V-MIX
U-MIX
B.F
LO-AMP
V-OSC
C42
R65
C65
C69
C98
R66
R67
R68
C71
R70
C74
C67
C66
D66
L67
C72
L68
C75
R71
Q65
R90
C70
C77
C73
R73
R69
L65
L66
L69
C76
D67
R74
D68
C78
c79
L72
L70
L71
R76
TP3
C86
C81
C82
C80
C84
L75
C85
D69
C41
R36
C55
R37
R38
D21
R39
C57
D22
C56
A
B
C
D
E
F
G
H
1
2
3
4
5

GRAM (A, B, C, D, E)

"FOR REFERENCE ONLY"

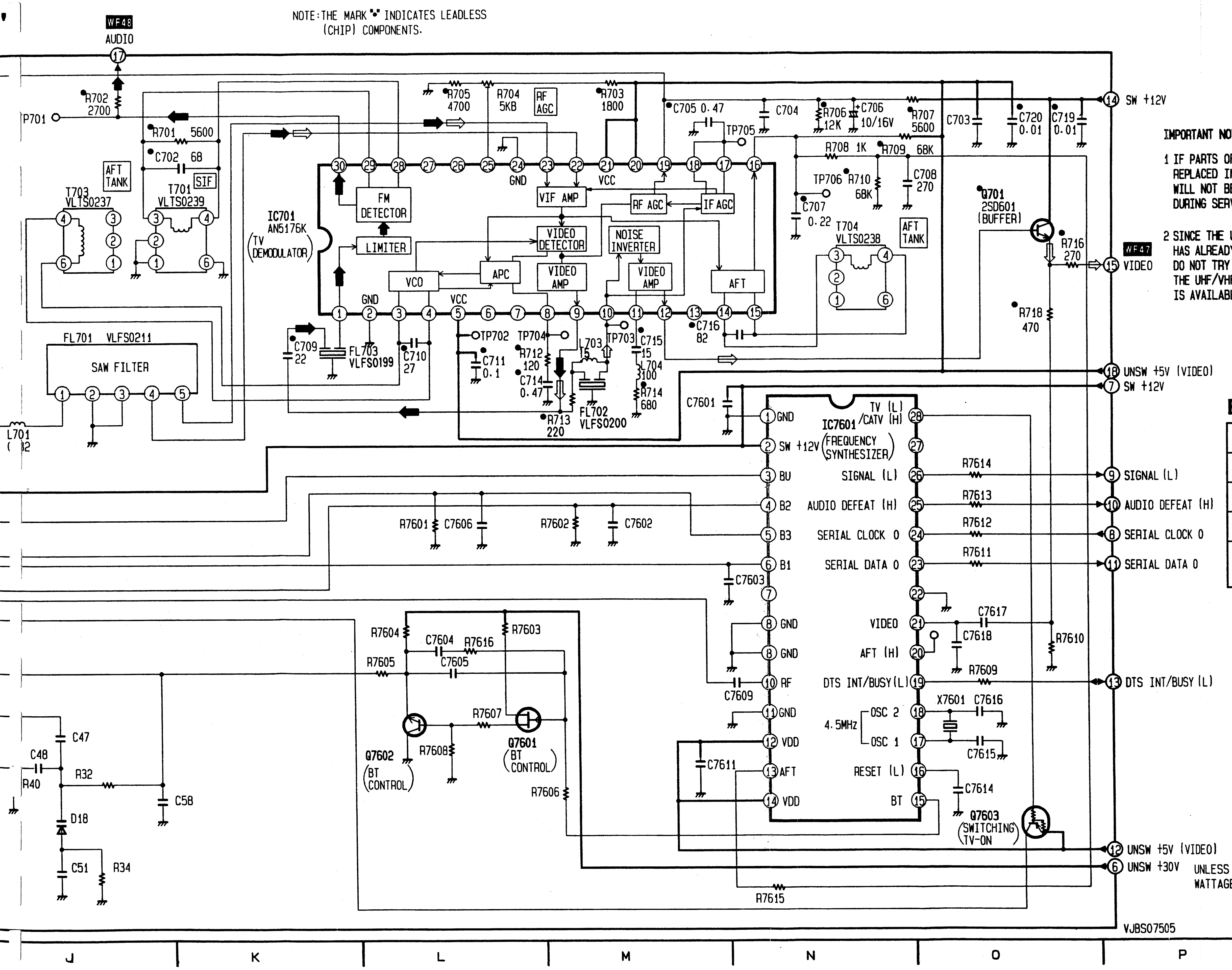
AUDIO SIGNAL

NOTE: THE MARK "•" INDICATES LEADLESS
(CHIP) COMPONENTS.



WF48
AUDIO
17
TP2
TP701
TP1
TP3
C31
C22
L14
C32
L17
D17
R26
C39
L25
R28
C36
C45
L24
C43
D11
D12
R20
C27
C28
R27
D9
D13
C33
L15
R21
L18
D10
C35
C38
C37
IC201
V-MIX
U-MIX
IF-AMP
B.F
REG.
LO-AMP
V-OSC
U-OSC
TP-AMP
C25
L16
R23
L19
L20
R24
C29
C42
R29
C40
R22
R25
C34
C26
R30
R702 2700
R701 5600
C702 68
AFT TANK
SIF
T703 VLTS0237
T701 VLTS0239
IC701 AN5176K
(TV DEMODULATOR)
FM DETECTOR
LIMITER
VCO
APC
VIDEO DETECTOR
VIDEO AMP
NOISE INVERTER
VIF AMP
RF AGC
IF AGC
R705 4700
R704 5KB
R703 1800
C705 0.47
GND
VCC
FL701 VLFS0211
SAW FILTER
L701 0.82
C709 22
FL703 VLFS0199
C710 27
TP702
TP704
TP703
C711 0.1
R712 120
C714 0.47
T5
L703
C715 15
L704 100
R714 680
C716 82
R713 220
FL702 VLFS0200
C7601
R7601
C7606
R7602
C7602
R7604
C7604
R7616
R7603
R7605
C7605
R7607
Q7602 (BT CONTROL)
R7608
Q7601 (BT CONTROL)
R7606
C761
R76
C86
C84
L75
C85
D69
C41
R36
R37
C55
R39
R38
D21
C57
D22
C56
C53
L22
C54
L23
C46
R33
L21
D20
R40
C48
C47
R32
C58
D19
C52
R35
D18
C51
R34
F
G
H
I
J
K
L
M

NOTE: THE MARK "•" INDICATES LEADLESS
(CHIP) COMPONENTS.


WF48
AUDIO
P701
R702 2700
R701 5600
C702 68
AFT TANK
T703 VLTS0237
T701 VLTS0239
SIF
IC701 AN5176K (TV DEMODULATOR)
R705 4700
R704 5KB
RF AGC
R703 1800
C705 0.47
C704
R706 12K
C706 10/16V
R707 5600
C703
C720 0.01
C719 0.01
TP705
R708 1K
R709 68K
TP706
R710 68K
C708 270
C707 0.22
T704 VLTS0238
AFT TANK
FM DETECTOR
LIMITER
VIF AMP
RF AGC
IF AGC
VIDEO DETECTOR
NOISE INVERTER
VIDEO AMP
VIDEO AMP
APC
VCO
AFT
GND
VCC
GND
VCC
Q701 2SD601 (BUFFER)
R716 270
R718 470
WF47
C716 82
C709 22
FL703 VLFS0199
C710 27
TP702
TP704
C711 0.1
R712 120
C714 0.47
R713 220
L703 15
TP703
C715 15
L704 3100
R714 680
FL702 VLFS0200
FL701 VLFS0211
SAW FILTER
L701
C7601
IC7601 (FREQUENCY SYNTHESIZER)
GND
SW +12V
BU
B2
B3
B1
GND
GND
RF
GND
VDD
AFT
VDD
TV (L) /CATV (H)
SIGNAL (L)
AUDIO DEFEAT (H)
SERIAL CLOCK 0
SERIAL DATA 0
VIDEO
AFT (H)
DTS INT/BUSY (L)
OSC 2
OSC 1
4.5MHz
RESET (L)
BT
R7614
R7613
R7612
R7611
C7617
C7618
R7609
X7601
C7616
C7615
C7614
R7610
Q7603 (SWITCHING TV-ON)
R7601
C7606
R7602
C7602
C7603
C7609
C7611
R7604
R7603
C7604
R7616
R7605
C7605
R7607
Q7601 (BT CONTROL)
Q7602 (BT CONTROL)
R7608
R7606
R7615
C47
C48
R32
R40
C58
D18
C51
R34
SW +12V
VIDEO
UNSW +5V (VIDEO)
SW +12V
SIGNAL (L)
AUDIO DEFEAT (H)
SERIAL CLOCK 0
SERIAL DATA 0
DTS INT/BUSY (L)
UNSW +5V (VIDEO)
UNSW +30V
VJBS07505
J
K
L
M
N
O
P
Q

IMPORTANT NOTICE:

1 IF PARTS OF TUNER AND FS SECTION ARE REPLACED INDIVIDUALLY. THE FCC SPECIFICATIONS WILL NOT BE SATISFIED. DURING SERVICING. PLEASE REPLACE AS A UNIT.

2 SINCE THE UHF/VHF TUNER/TV DEMODULATOR UNIT HAS ALREADY BEEN PRE-ADJUSTED AT THE FACTORY, DO NOT TRY TO ADJUST THE UHF/VHF TUNER/TV DEMODULATOR UNIT. THE UHF/VHF TUNER/TV DEMODULATOR UNIT REPLACEMENT PART IS AVAILABLE ONLY AS A COMPLETE ASSEMBLY UNIT.

BAND SELECTION CHART

B1	B2	B3	BU	CHANNEL
11V	0V	0V	0V	2CH ~ 6CH 5A ,A-5 ~ A-3
6V	11V	0V	0V	7CH ~ 13CH A ~I ,A-2,A-1
7V	11V	11.5V	0V	J ~ EEE
0V	0V	0V	11.5V	14CH ~ 69CH 65CH ~ 94CH (CATV) 100CH ~ 125CH (CATV)

NOTE : THE VOLTAGES ARE APPROXIMATE.

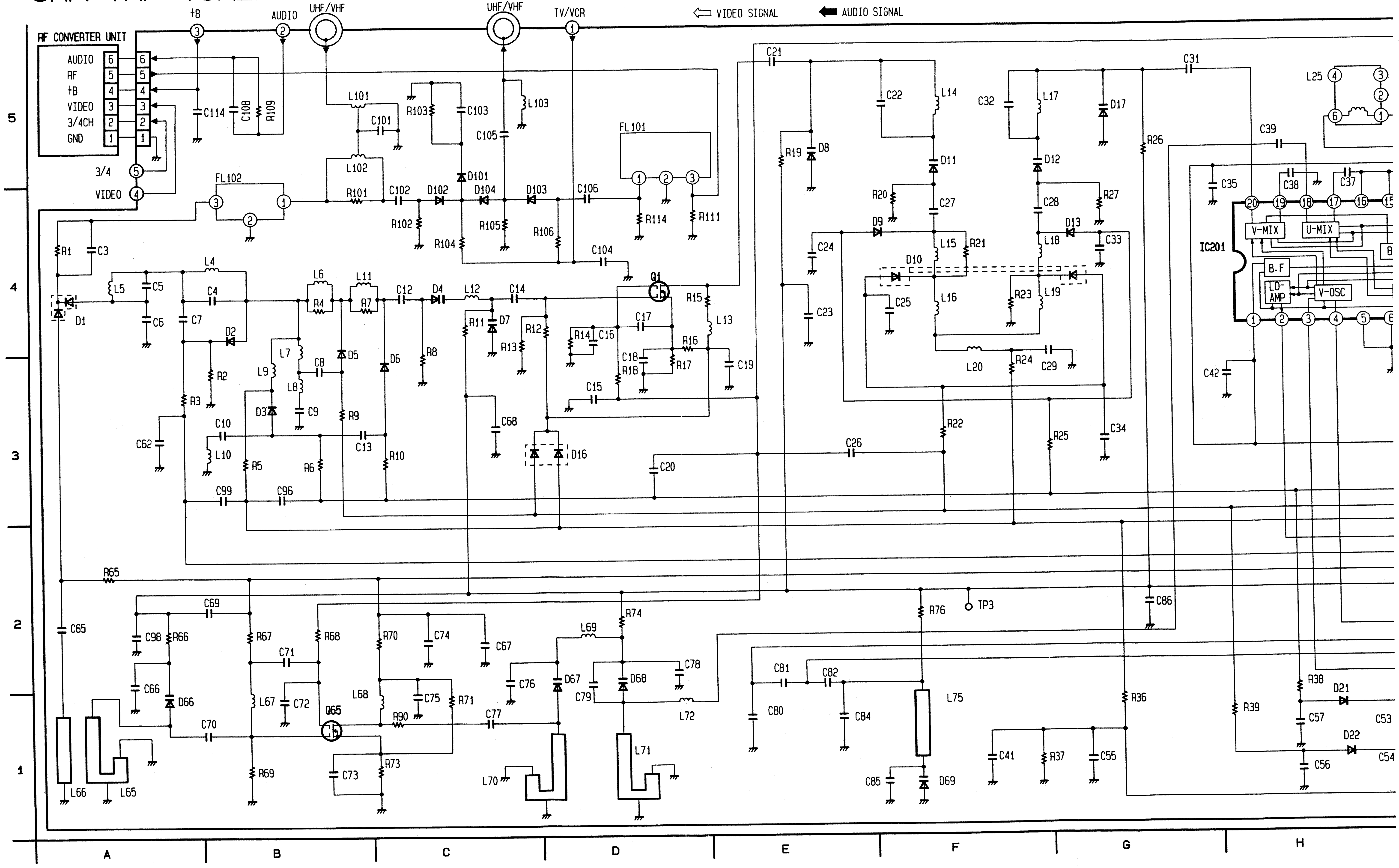
COMPARISON CHART
OF MODELS & MARKS

MODEL	MARK
PV-4308	A
PV-4311	B
PV-4311-K	C
PV-4315S	D
PV-4325S	E
PV-4351	F
PV-4351-K	G
PV-4358	H
PV-4355S	I

UNLESS OTHERWISE SPECIFIED:
WATTAGE OF RESISTORS ARE 1/8W AND 1/16W.

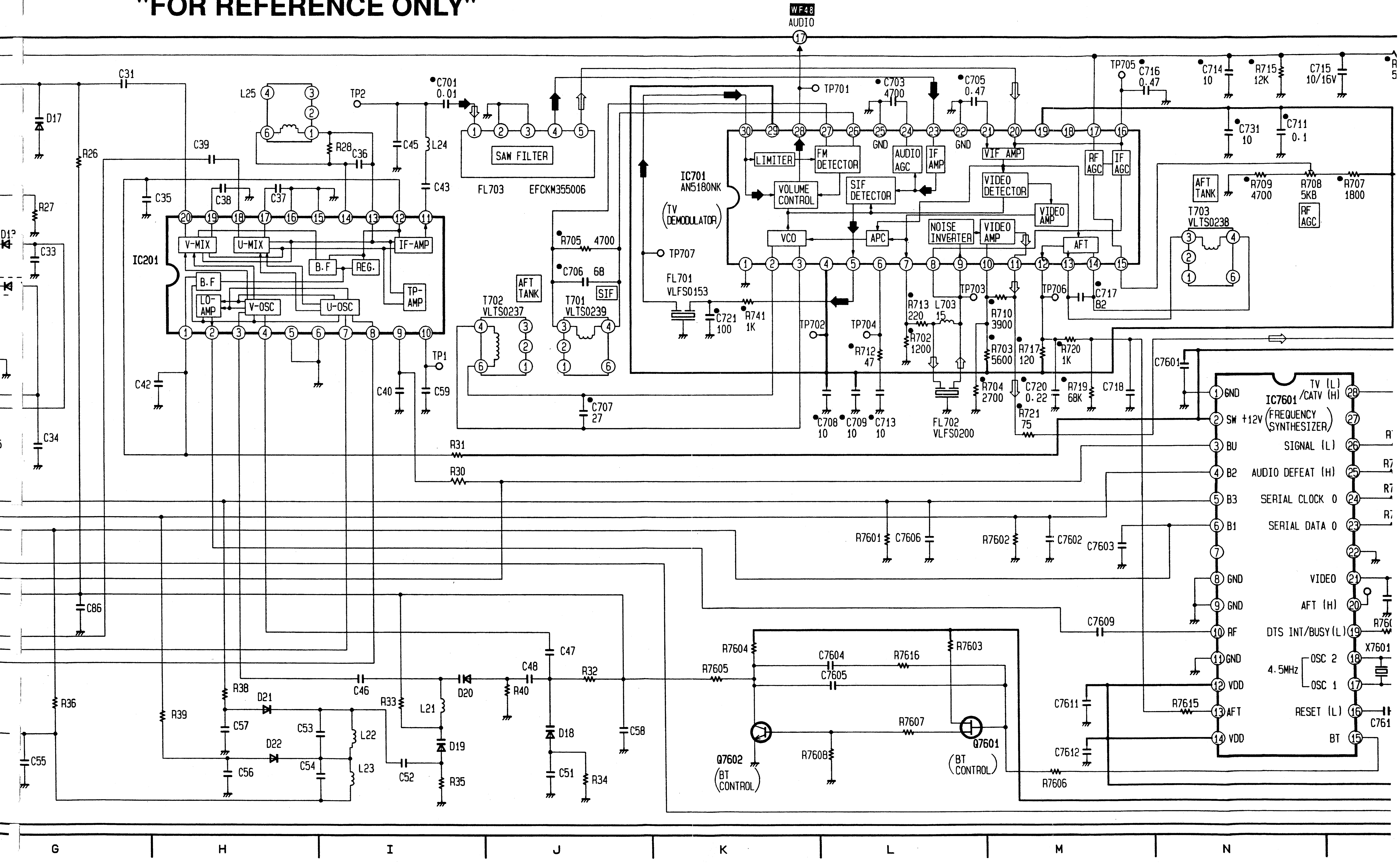
UHF/VHF TUNER/TV DEMODULATOR SCHEMATIC DIAGRAM (F, G, H, I)

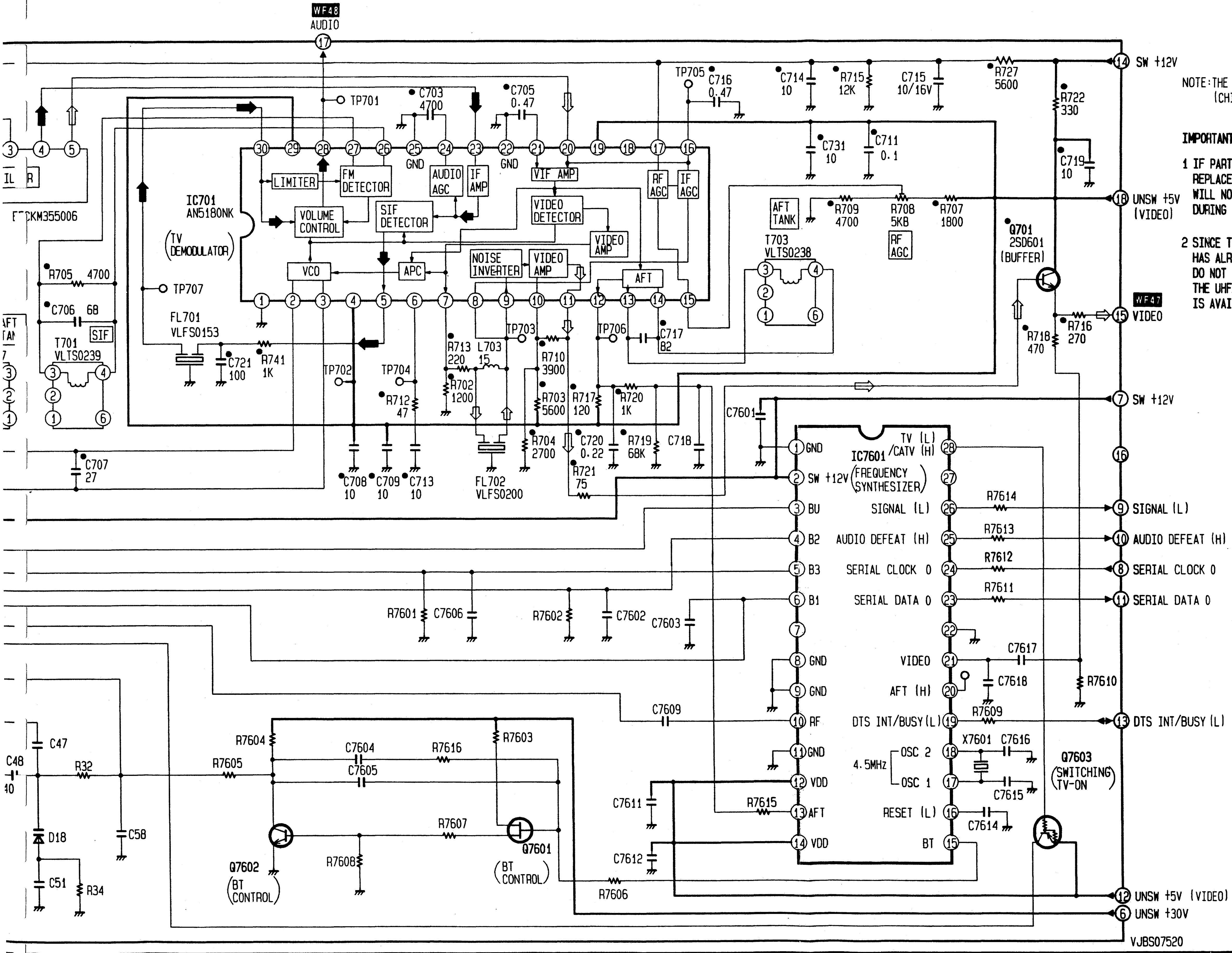
"FOR REFERE



+B
AUDIO
UHF/VHF
UHF/VHF
TV/VCR
VIDEO SIGNAL
AUDIO SIGNAL
RF CONVERTER UNIT
AUDIO
RF
+B
VIDEO
3/4CH
GND
3/4
VIDEO
5
4
3
2
1
A
B
C
D
E
F
G
H
FL102
FL101
L101
L102
L103
C101
C102
C103
C104
C105
C106
C108
C114
R101
R102
R103
R104
R105
R106
R109
R111
R114
D101
D102
D103
D104
R1
C3
L4
L5
C5
C6
C4
C7
D1
D2
R2
R3
L6
L11
R4
R7
C12
D4
L12
C14
L7
L8
L9
C8
C9
D3
D5
D6
R8
R9
C10
L10
C62
R5
R6
C13
R10
C99
C96
R11
D7
R12
R13
C68
D16
Q1
R14
C16
C17
C18
R18
R16
R17
C15
R15
L13
C19
C20
C21
C22
L14
R19
D8
D11
R20
C27
D9
C24
C23
L15
R21
D10
C25
L16
L20
C26
R22
C32
L17
D17
D12
C28
R27
D13
L18
C33
R23
L19
R24
C29
R25
C34
R26
C31
C39
L25
C35
C38
C37
IC201
V-MIX
U-MIX
B.F
LO-AMP
V-OSC
C42
R65
C65
L66
L65
C98
R66
C69
C66
D66
C70
R67
C71
L67
C72
R69
R68
Q65
C73
R73
R70
C74
C67
L68
C75
R71
R90
C77
R74
L69
C76
D67
L70
C79
D68
C78
L72
L71
R76
TP3
C86
C81
C82
C80
C84
L75
C85
D69
C41
R37
C55
R36
R39
R38
D21
C57
C53
D22
C56
C54

"FOR REFERENCE ONLY"


WF48
AUDIO
IC201
V-MIX
U-MIX
IF-AMP
B.F
REG.
TP-AMP
LO-AMP
V-OSC
U-OSC
SAW FILTER
FL703
EFCKM355006
IC701
AN5180NK
(TV DEMODULATOR)
LIMITER
FM DETECTOR
AUDIO AGC
IF AMP
VIF AMP
RF AGC
IF AGC
VOLUME CONTROL
SIF DETECTOR
VIDEO DETECTOR
VIDEO AMP
VCO
APC
NOISE INVERTER
AFT
AFT TANK
SIF
T701 VLTS0239
T702 VLTS0237
T703 VLTS0238
FL701 VLFS0153
FL702 VLFS0200
L703 15
TP1
TP2
TP701
TP702
TP703
TP704
TP705
TP706
TP707
GND
C701 0.01
C703 4700
C705 0.47
C706 68
C707 27
C708 10
C709 10
C713 10
C714 10
C715 10/16V
C716 0.47
C717 82
C718
C720 0.22
C721 100
C731 10
C711 0.1
R705 4700
R707 1800
R708 5KB
R709 4700
R710 3900
R702 1200
R703 5600
R704 2700
R712 47
R713 220
R715 12K
R717 120
R719 68K
R720 1K
R721 75
R741 1K
IC7601
(FREQUENCY SYNTHESIZER)
GND
SW +12V
BU
B2
B3
B1
GND
GND
RF
GND
VDD
AFT
VDD
TV (L)/CATV (H)
SIGNAL (L)
AUDIO DEFEAT (H)
SERIAL CLOCK 0
SERIAL DATA 0
VIDEO
AFT (H)
DTS INT/BUSY (L)
OSC 2
OSC 1
4.5MHz
X7601
RESET (L)
BT
Q7601 (BT CONTROL)
Q7602 (BT CONTROL)
R7601
R7602
R7603
R7604
R7605
R7606
R7607
R7608
R7615
R7616
C7601
C7602
C7603
C7604
C7605
C7606
C7609
C7611
C7612
C31
C33
C34
C35
C36
C37
C38
C39
C40
C42
C43
C45
C46
C47
C48
C51
C52
C53
C54
C55
C56
C57
C58
C59
C86
D17
D18
D19
D20
D21
D22
L21
L22
L23
L24
L25
R26
R27
R28
R30
R31
R32
R33
R34
R35
R36
R38
R39
R40
G
H
I
J
K
L
M
N


WF48
AUDIO
TP701
C703 4700
C705 0.47
TP705
C716 0.47
C714 10
R715 12K
C715 10/16V
R727 5600
R722 330
SW +12V
GND
IC701
AN5180NK
(TV DEMODULATOR)
LIMITER
FM DETECTOR
AUDIO AGC
IF AMP
VIF AMP
RF AGC
IF AGC
VOLUME CONTROL
SIF DETECTOR
VIDEO DETECTOR
VIDEO AMP
NOISE INVERTER
VCO
APC
AFT
C731 10
C711 0.1
C719 10
UNSW +5V (VIDEO)
AFT TANK
R709 4700
R708 5KB
R707 1800
RF AGC
T703 VLTS0238
Q701 2SD601 (BUFFER)
WF47
VIDEO
R716 270
R718 470
R705 4700
C706 68
TP707
FL701 VLFS0153
T701 VLTS0239
SIF
C721 100
R741 1K
TP702
TP704
R712 47
TP703
R713 220
L703 15
R702 1200
R710 3900
TP706
C717 82
R703 5600
R717 120
R720 1K
R704 2700
C720 0.22
R719 68K
C718
R721 75
C707 27
C708 10
C709 10
C713 10
FL702 VLFS0200
C7601
SW +12V
IC7601
(FREQUENCY SYNTHESIZER)
TV (L) /CATV (H)
BU
B2
B3
B1
GND
RF
VDD
AFT
SIGNAL (L)
AUDIO DEFEAT (H)
SERIAL CLOCK 0
SERIAL DATA 0
VIDEO
AFT (H)
DTS INT/BUSY (L)
OSC 2
OSC 1
4.5MHz
RESET (L)
BT
R7614
R7613
R7612
R7611
C7617
C7618
R7610
R7609
X7601
C7616
C7615
C7614
Q7603 (SWITCHING TV-ON)
R7601
C7606
R7602
C7602
C7603
C7609
R7604
R7603
C7604
C7605
R7616
R7605
R7607
R7608
Q7602 (BT CONTROL)
Q7601 (BT CONTROL)
C7611
C7612
R7615
R7606
C47
C48
R32
C58
D18
C51
R34
UNSW +5V (VIDEO)
UNSW +30V
VJBS07520
KM355006
J
K
L
M
N
O
P
Q

NOTE: THE MARK "•" INDICATES LEADLESS (CHIP) COMPONENTS.

IMPORTANT NOTICE:

1 IF PARTS OF TUNER AND FS SECTION ARE REPLACED INDIVIDUALLY, THE FCC SPECIFICATIONS WILL NOT BE SATISFIED. DURING SERVICING, PLEASE REPLACE AS A UNIT.

2 SINCE THE UHF/VHF TUNER/TV DEMODULATOR UNIT HAS ALREADY BEEN PRE-ADJUSTED AT THE FACTORY, DO NOT TRY TO ADJUST THE UHF/VHF TUNER/TV DEMODULATOR UNIT. THE UHF/VHF TUNER/TV DEMODULATOR UNIT REPLACEMENT PART IS AVAILABLE ONLY AS A COMPLETE ASSEMBLY UNIT.

BAND SELECTION CHART

B1	B2	B3	BU	CHANNEL
11V	0V	0V	0V	2CH ~ 6CH 5A,A-5 ~ A-3
6V	11V	0V	0V	7CH ~ 13CH A-I,A-2,A-1
7V	11V	11.5V	0V	J ~ EEE
0V	0V	0V	11.5V	14CH ~ 69CH 65CH ~ 94CH (CATV) 100CH ~ 125CH (CATV)

NOTE: THE VOLTAGES ARE APPROXIMATE.

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-4308	A
PV-4311	B
PV-4311-K	C
PV-4315S	D
PV-4325S	E
PV-4351	F
PV-4351-K	G
PV-4358	H
PV-4355S	I

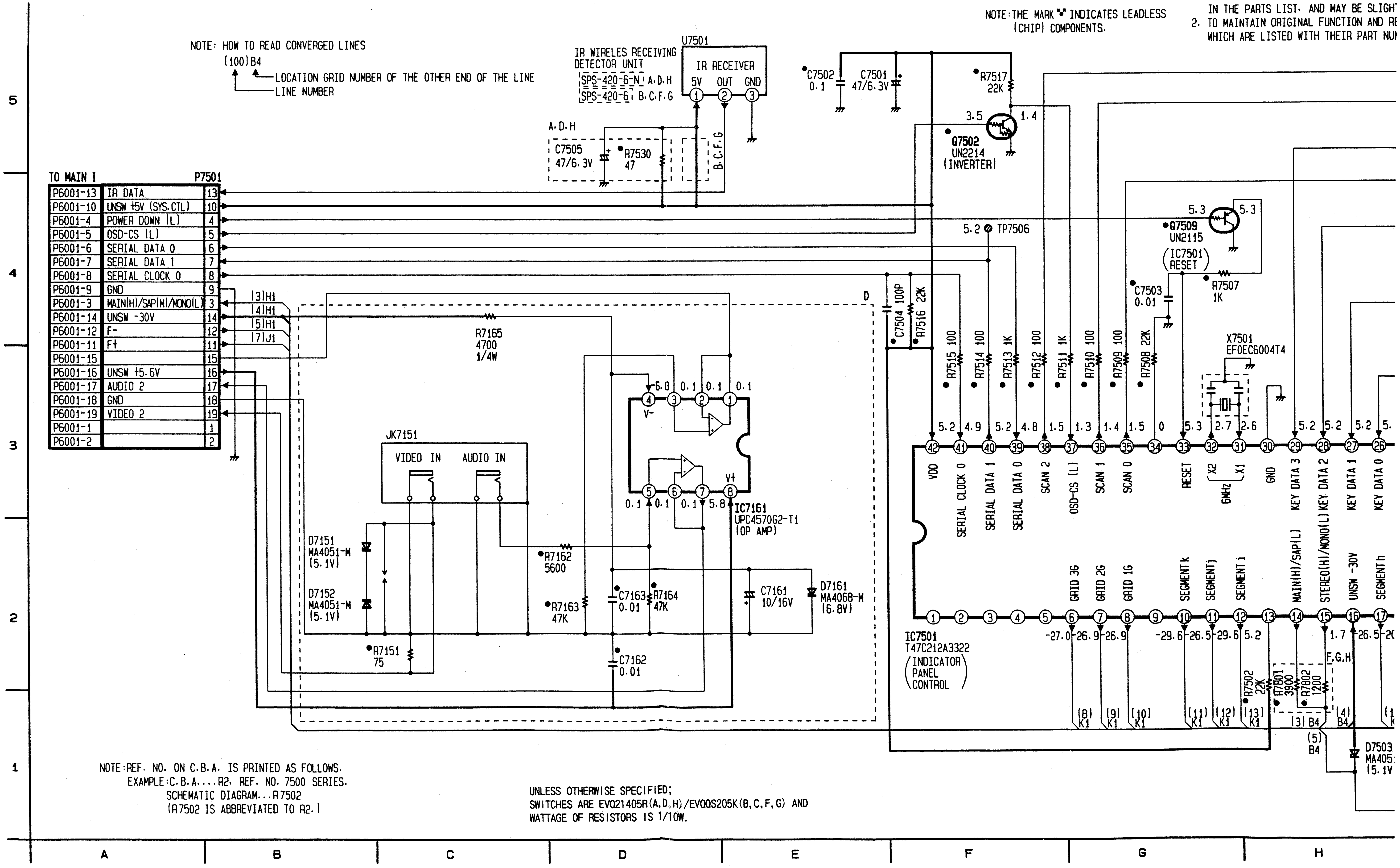
UNLESS OTHERWISE SPECIFIED:
WATTAGE OF RESISTORS ARE 1/8W AND 1/16W.

OPERATION SCHEMATIC DIAGRAM (A, B, C, D, F, G, H)

NOTE:
1. DO NOT USE THE PART NUMBER SHOWN ON
   IN THE PARTS LIST, AND MAY BE SLIGH
2. TO MAINTAIN ORIGINAL FUNCTION AND R
   WHICH ARE LISTED WITH THEIR PART NU

NOTE: THE MARK "•" INDICATES LEADLESS (CHIP) COMPONENTS.

NOTE: HOW TO READ CONVERGED LINES
(100) B4
LOCATION GRID NUMBER OF THE OTHER END OF THE LINE
LINE NUMBER



TO MAIN I
P7501
P6001-13 IR DATA 13
P6001-10 UNSW +5V (SYS.CTL) 10
P6001-4 POWER DOWN (L) 4
P6001-5 OSD-CS (L) 5
P6001-6 SERIAL DATA 0 6
P6001-7 SERIAL DATA 1 7
P6001-8 SERIAL CLOCK 0 8
P6001-9 GND 9
P6001-3 MAIN(H)/SAP(M)/MONO(L) 3
P6001-14 UNSW -30V 14
P6001-12 F- 12
P6001-11 F+ 11
P6001-15 15
P6001-16 UNSW +5.6V 16
P6001-17 AUDIO 2 17
P6001-18 GND 18
P6001-19 VIDEO 2 19
P6001-1 1
P6001-2 2
(3)H1
(4)H1
(5)H1
(7)J1
IR WIRELES RECEIVING DETECTOR UNIT
SPS-420-6-N A,D,H
SPS-420-6 B,C,F,G
U7501
IR RECEIVER
5V OUT GND
A,D,H
C7505 47/6.3V
R7530 47
B,C,F,G
C7502 0.1
C7501 47/6.3V
R7517 22K
3.5
1.4
Q7502 UN2214 (INVERTER)
5.2 TP7506
5.3
5.3
Q7509 UN2115
(IC7501 RESET)
R7507 1K
C7503 0.01
X7501 EF0EC6004T4
C7504 100P
R7516 22K
R7515 100
R7514 100
R7513 1K
R7512 100
R7511 1K
R7510 100
R7509 100
R7508 22K
D
R7165 4700 1/4W
JK7151
VIDEO IN
AUDIO IN
D7151 MA4051-M (5.1V)
D7152 MA4051-M (5.1V)
R7151 75
R7162 5600
R7163 47K
C7163 0.01
R7164 47K
C7161 10/16V
D7161 MA4068-M (6.8V)
C7162 0.01
6.8 0.1 0.1 0.1
V-
V+
0.1 0.1 0.1 5.8
IC7161 UPC4570G2-T1 (OP AMP)
5.2 4.9 5.2 4.8 1.5 1.3 1.4 1.5 0 5.3 2.7 2.6 5.2 5.2 5.2 5.
VDD
SERIAL CLOCK 0
SERIAL DATA 1
SERIAL DATA 0
SCAN 2
OSD-CS (L)
SCAN 1
SCAN 0
RESET
X2
X1
6MHz
GND
KEY DATA 3
KEY DATA 2
KEY DATA 1
KEY DATA 0
GRID 36
GRID 26
GRID 16
SEGMENT k
SEGMENT j
SEGMENT i
MAIN(H)/SAP(L)
STEREO(H)/MONO(L)
UNSW -30V
SEGMENT h
-27.0 -26.9 -26.9 -29.6 -26.5 -29.6 5.2 1.7 -26.5 -2
IC7501 T47C212A3322 (INDICATOR PANEL CONTROL)
(8) K1
(9) K1
(10) K1
(11) K1
(12) K1
(13) K1
R7502 22K
R7801 3900
R7802 1200
F,G,H
(3) B4
(4) B4
(5) B4
D7503 MA405 (5.1V
5
4
3
2
1
A
B
C
D
E
F
G
H

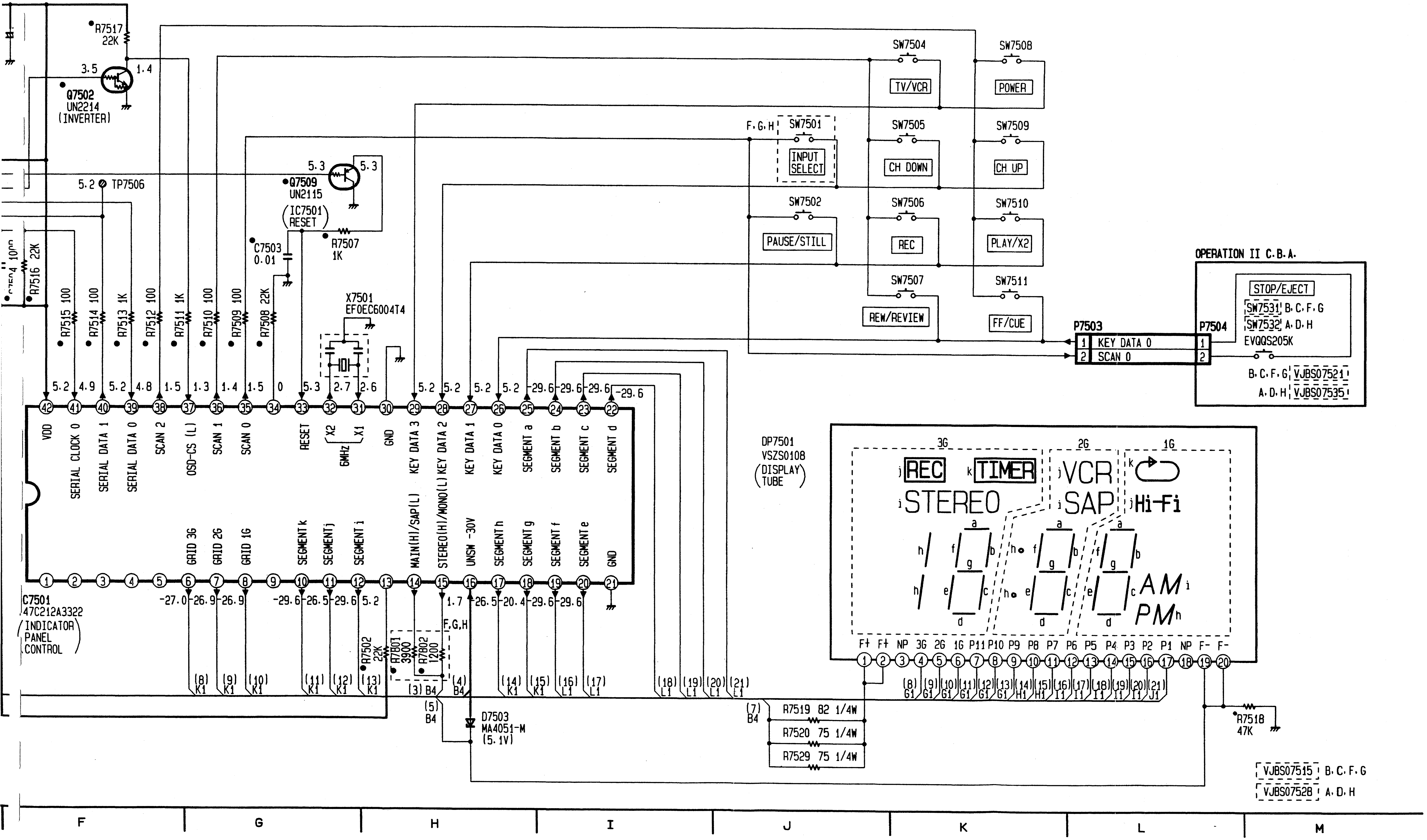
NOTE: REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE: C.B.A.....R2, REF. NO. 7500 SERIES.
SCHEMATIC DIAGRAM...R7502
(R7502 IS ABBREVIATED TO R2.)

UNLESS OTHERWISE SPECIFIED;
SWITCHES ARE EVQ21405R(A,D,H)/EVQQS205K(B,C,F,G) AND
WATTAGE OF RESISTORS IS 1/10W.

NOTE: THE MARK "•" INDICATES LEADLESS (CHIP) COMPONENTS.

NOTE:
1. DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.
2. TO MAINTAIN ORIGINAL FUNCTION AND RELIABILITY OF REPAIRED UNITS, USE ONLY ORIGINAL REPLACEMENT PARTS WHICH ARE LISTED WITH THEIR PART NUMBERS IN THE PARTS LIST SECTION OF THE SERVICE MANUAL.

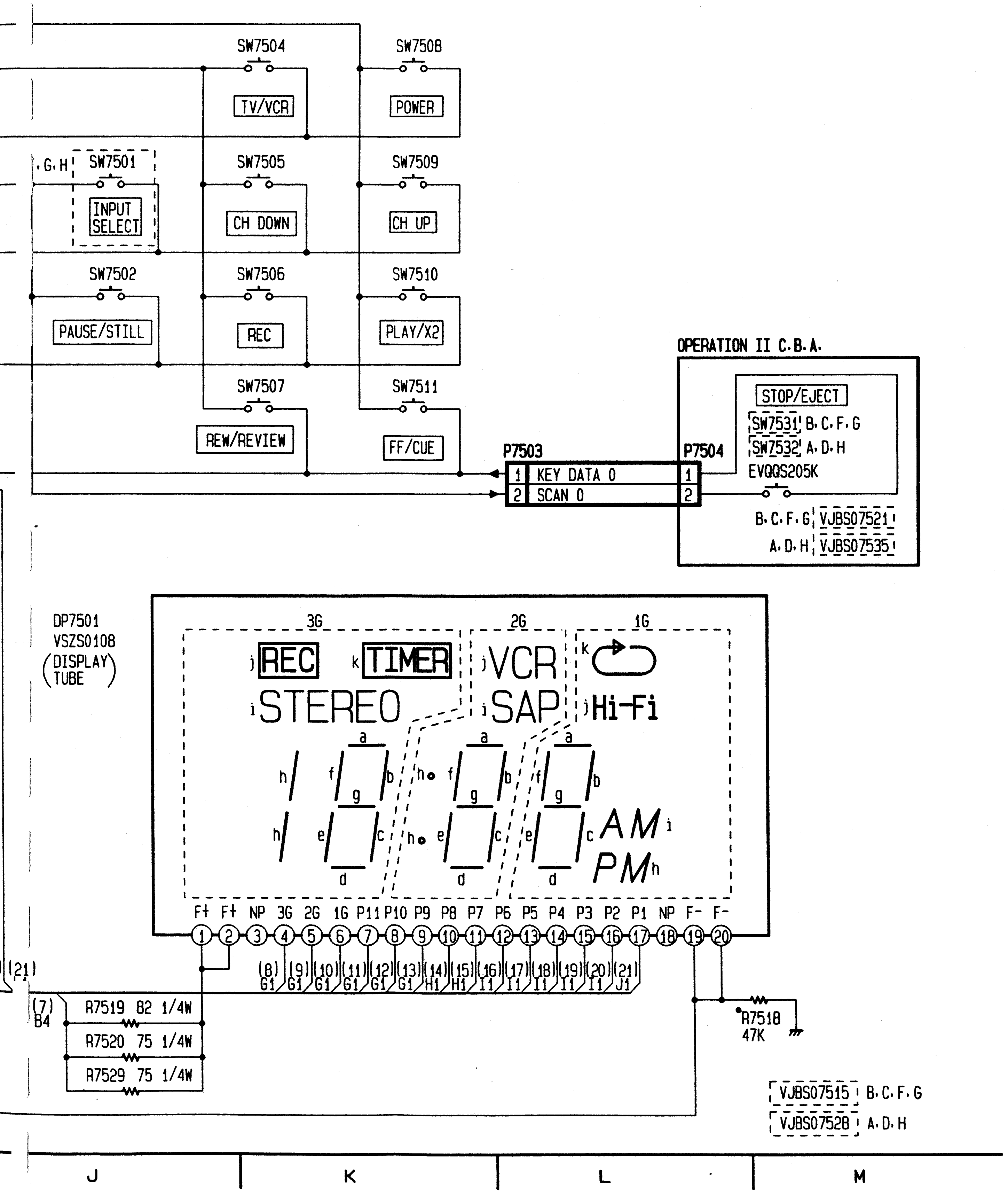
TEST POINT INFORMATION
- ⦶ : TEST POINT WITH A JUMPER WIRE ACROSS A HOLE IN THE P.C.B.
- ▭→ : TEST POINT WITH A COMPONENT LEAD ON THE FOIL SIDE.
- ⊘ : TEST POINT WITH NO TEST PIN.
- ● : TEST POINT WITH A TEST PIN.



R7517 22K
Q7502 UN2214 (INVERTER)
3.5
1.4
5.2 TP7506
5.3
Q7509 UN2115
(IC7501 RESET)
R7507 1K
C7503 0.01
R7516 22K
R7515 100
R7514 100
R7513 1K
R7512 100
R7511 1K
R7510 100
R7509 100
R7508 22K
X7501 EF0EC6004T4
IC7501 47C212A3322 (INDICATOR PANEL CONTROL)
VDD
SERIAL CLOCK 0
SERIAL DATA 1
SERIAL DATA 0
SCAN 2
OSD-CS (L)
SCAN 1
SCAN 0
RESET
X2
X1
6MHz
GND
KEY DATA 3
KEY DATA 2
KEY DATA 1
KEY DATA 0
SEGMENT a
SEGMENT b
SEGMENT c
SEGMENT d
GRID 3G
GRID 2G
GRID 1G
SEGMENT k
SEGMENT j
SEGMENT i
MAIN(H)/SAP(L)
STEREO(H)/MONO(L)
UNSW -30V
SEGMENT h
SEGMENT g
SEGMENT f
SEGMENT e
GND
5.2 4.9 5.2 4.8 1.5 1.3 1.4 1.5 0 5.3 2.7 2.6 5.2 5.2 5.2 5.2 -29.6 -29.6 -29.6 -29.6
-27.0 -26.9 -26.9 -29.6 -26.5 -29.6 5.2 1.7 -26.5 -20.4 -29.6 -29.6
R7502 22K
R7801 3900
R7802 1200
F,G,H
D7503 MA4051-M (5.1V)
SW7501 INPUT SELECT F,G,H
SW7502 PAUSE/STILL
SW7504 TV/VCR
SW7505 CH DOWN
SW7506 REC
SW7507 REW/REVIEW
SW7508 POWER
SW7509 CH UP
SW7510 PLAY/X2
SW7511 FF/CUE
OPERATION II C.B.A.
STOP/EJECT
SW7531 B,C,F,G
SW7532 A,D,H
EVQQS205K
P7503
P7504
1 KEY DATA 0
2 SCAN 0
B,C,F,G VJBS07521
A,D,H VJBS07535
DP7501 VSZS0108 (DISPLAY TUBE)
3G 2G 1G
REC TIMER VCR STEREO SAP Hi-Fi AM PM
F+ F+ NP 3G 2G 1G P11 P10 P9 P8 P7 P6 P5 P4 P3 P2 P1 NP F- F-
R7519 82 1/4W
R7520 75 1/4W
R7529 75 1/4W
R7518 47K
VJBS07515 B,C,F,G
VJBS07528 A,D,H
F G H I J K L M

PART NUMBER IS SHOWN
WAS PREPARED.
NAL REPLACEMENT PARTS
SERVICE MANUAL.

TEST POINT INFORMATION
⊕ : TEST POINT WITH A JUMPER WIRE ACROSS A HOLE IN THE P.C.B.
▭→: TEST POINT WITH A COMPONENT LEAD ON THE FOIL SIDE.
⊘ : TEST POINT WITH NO TEST PIN.
● : TEST POINT WITH A TEST PIN.



SW7504
TV/VCR
SW7508
POWER
G, H
SW7501
INPUT SELECT
SW7505
CH DOWN
SW7509
CH UP
SW7502
PAUSE/STILL
SW7506
REC
SW7510
PLAY/X2
SW7507
REW/REVIEW
SW7511
FF/CUE
OPERATION II C.B.A.
STOP/EJECT
SW7531 B, C, F, G
SW7532 A, D, H
EVQQS205K
P7503
P7504
1 KEY DATA 0 1
2 SCAN 0 2
B, C, F, G VJBS07521
A, D, H VJBS07535
DP7501
VSZS0108
(DISPLAY TUBE)
3G
2G
1G
REC
TIMER
VCR
STEREO
SAP
Hi-Fi
AM
PM
a b c d e f g h i j k
F+ F+ NP 3G 2G 1G P11 P10 P9 P8 P7 P6 P5 P4 P3 P2 P1 NP F- F-
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮ ⑯ ⑰ ⑱ ⑲ ⑳
(8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (21)
G1 G1 G1 G1 G1 G1 H1 H1 I1 I1 I1 I1 I1 J1
(21)
(7) B4
R7519 82 1/4W
R7520 75 1/4W
R7529 75 1/4W
R7518 47K
VJBS07515 B, C, F, G
VJBS07528 A, D, H
J
K
L
M

COMPARISON CHART
OF MODELS & MARKS

MODEL	MARK
PV-4308	A
PV-4311	B
PV-4311-K	C
PV-4315S	D
PV-4325S	E
PV-4351	F
PV-4351-K	G
PV-4358	H
PV-4355S	I

IC7501 KEY MATRIX CHART (A,B,C,D)

KEY DATA IN	SCAN OUT		
	SCAN 0 (PIN 35)	SCAN 1 (PIN 36)	SCAN 2 (PIN 38)
KEY DATA 0 (PIN 26)	STOP/EJECT	REW/REVIEW	FF/CUE
KEY DATA 1 (PIN 27)	PAUSE/STILL	REC	PLAY/X2
KEY DATA 2 (PIN 28)	- - - - -	CH DOWN	CH UP
KEY DATA 3 (PIN 29)	- - - - -	TV/VCR	POWER

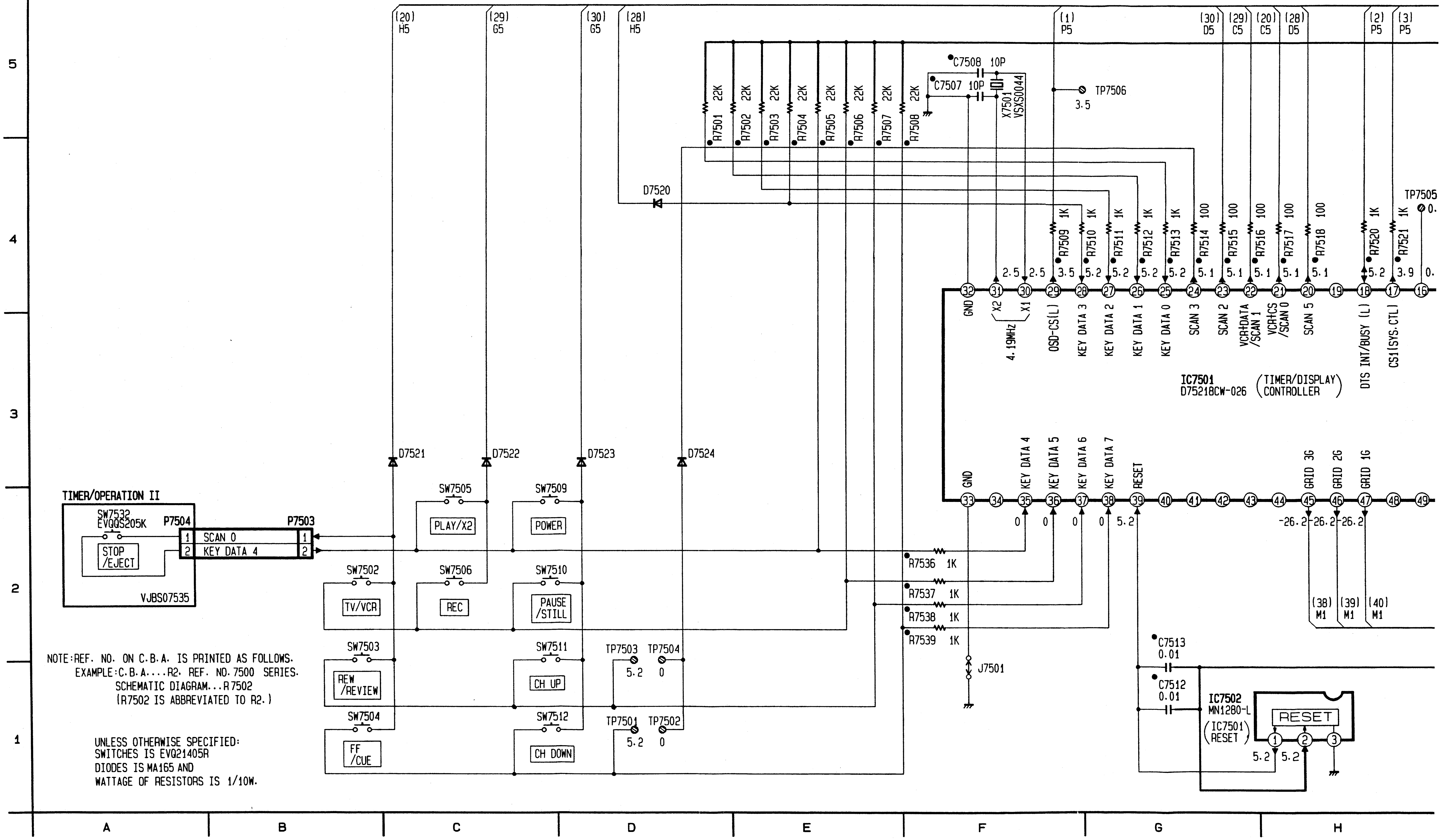
IC7501 KEY MATRIX CHART (F,G,H)

KEY DATA IN	SCAN OUT		
	SCAN 0 (PIN 35)	SCAN 1 (PIN 36)	SCAN 2 (PIN 38)
KEY DATA 0 (PIN 26)	STOP/EJECT	REW/REVIEW	FF/CUE
KEY DATA 1 (PIN 27)	PAUSE/STILL	REC	PLAY/X2
KEY DATA 2 (PIN 28)	INPUT SELECT	CH DOWN	CH UP
KEY DATA 3 (PIN 29)	- - - - -	TV/VCR	POWER

TIMER/OPERATION I/II SCHEMATIC DIAGRAM (E)

NOTE: THE MARK "•" INDICATES LEADLESS
(CHIP) COMPONENTS.

NOTE:
1. DO NOT USE THE PART NUMBER SHOW
IN THE PARTS LIST, AND MAY BE S
2. TO MAINTAIN ORIGINAL FUNCTION A
WHICH ARE LISTED WITH THEIR PAR



5
4
3
2
1
A
B
C
D
E
F
G
H
(20) H5
(29) G5
(30) G5
(28) H5
(1) P5
(30) D5
(29) C5
(20) C5
(28) D5
(2) P5
(3) P5
C7508 10P
C7507 10P
X7501 VSX50044
TP7506
3.5
R7501 22K
R7502 22K
R7503 22K
R7504 22K
R7505 22K
R7506 22K
R7507 22K
R7508 22K
D7520
R7509 1K
R7510 1K
R7511 1K
R7512 1K
R7513 1K
R7514 100
R7515 100
R7516 100
R7517 100
R7518 100
R7520 1K
R7521 1K
TP7505
2.5
2.5
3.5
5.2
5.2
5.2
5.2
5.1
5.1
5.1
5.1
5.1
5.2
3.9
GND
X2
X1
4.19MHz
OSD-CS(L)
KEY DATA 3
KEY DATA 2
KEY DATA 1
KEY DATA 0
SCAN 3
SCAN 2
VCR:DATA /SCAN 1
VCR:CS /SCAN 0
SCAN 5
DTS INT/BUSY (L)
CS1(SYS.CTL)
IC7501 D75218CW-026 (TIMER/DISPLAY CONTROLLER)
D7521
D7522
D7523
D7524
GND
KEY DATA 4
KEY DATA 5
KEY DATA 6
KEY DATA 7
RESET
GRID 3G
GRID 2G
GRID 1G
0
0
0
0
5.2
-26.2
-26.2
-26.2
TIMER/OPERATION II
SW7532 EVQQS205K
P7504
P7503
STOP /EJECT
SCAN 0
KEY DATA 4
VJBS07535
SW7505
PLAY/X2
SW7509
POWER
SW7502
TV/VCR
SW7506
REC
SW7510
PAUSE /STILL
SW7503
REW /REVIEW
SW7511
CH UP
SW7504
FF /CUE
SW7512
CH DOWN
TP7503
TP7504
5.2
0
TP7501
TP7502
5.2
0
R7536 1K
R7537 1K
R7538 1K
R7539 1K
J7501
(38) M1
(39) M1
(40) M1
C7513 0.01
C7512 0.01
IC7502 MN1280-L (IC7501 RESET)
RESET
5.2
5.2

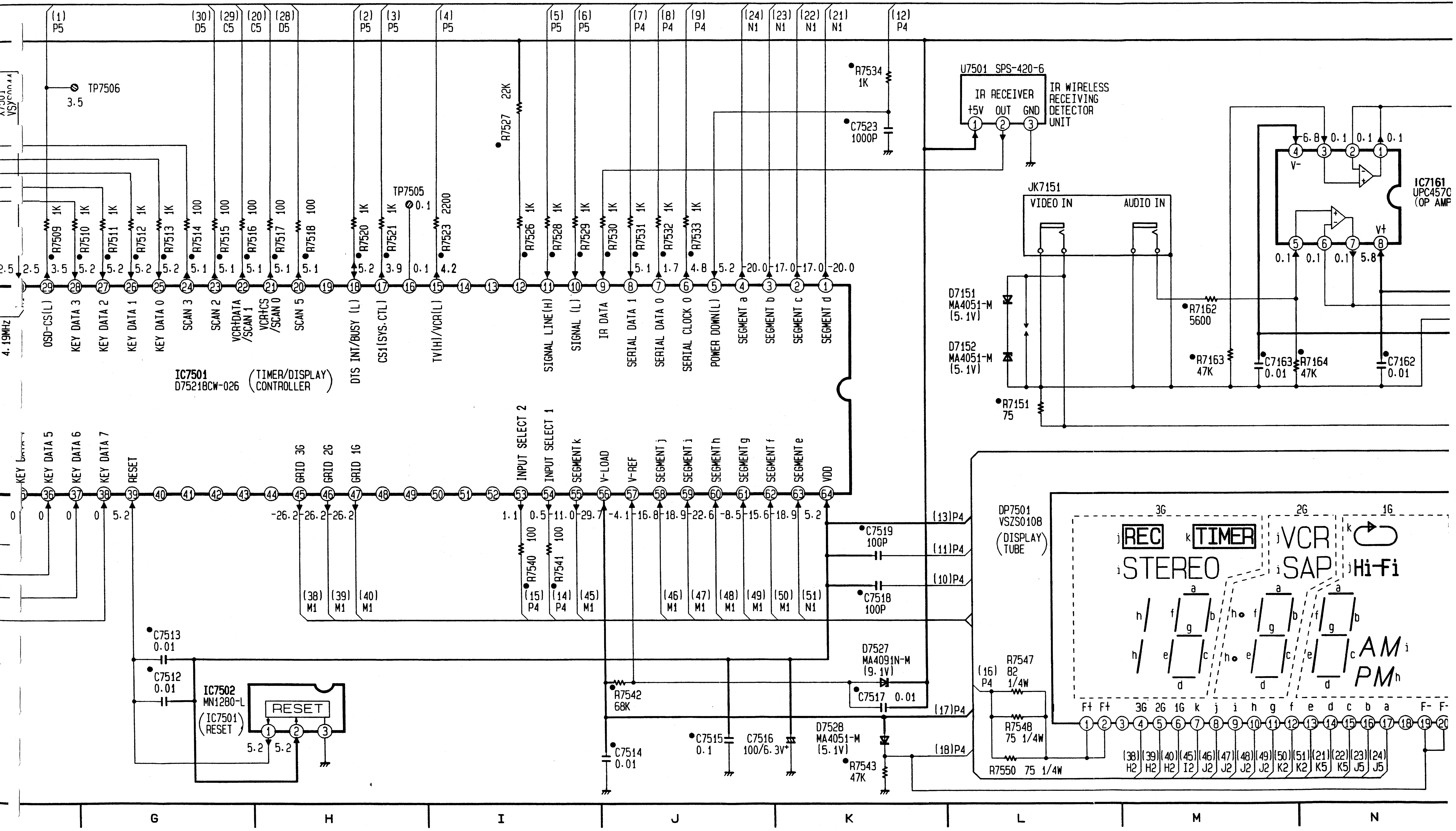
NOTE: REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE: C.B.A.....R2, REF. NO. 7500 SERIES.
SCHEMATIC DIAGRAM...R7502
(R7502 IS ABBREVIATED TO R2.)

UNLESS OTHERWISE SPECIFIED:
SWITCHES IS EVQ21405R
DIODES IS MA165 AND
WATTAGE OF RESISTORS IS 1/10W.

INDICATES LEADLESS
ON TS.

NOTE:
1. DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST. AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.
2. TO MAINTAIN ORIGINAL FUNCTION AND RELIABILITY OF REPAIRED UNITS. USE ONLY ORIGINAL REPLACEMENT PARTS WHICH ARE LISTED WITH THEIR PART NUMBERS IN THE PARTS LIST SECTION OF THE SERVICE MANUAL.

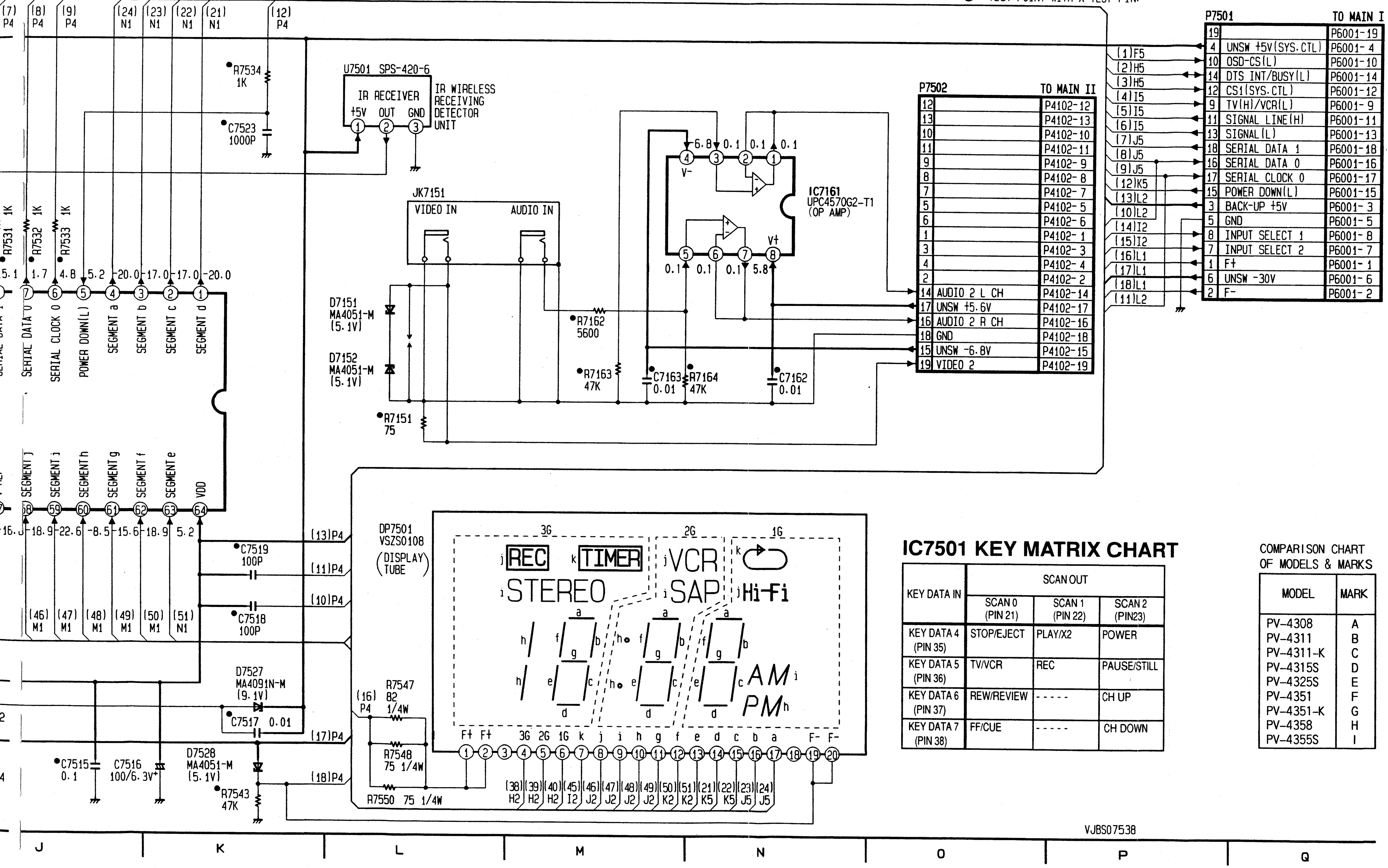
NOTE: HOW TO READ CONVERGED LINES
(100)B4
LOCATION GRID NUMBER OF THE OTHER END OF THE LINE
LINE NUMBER


IC7501
D75218CW-026
(TIMER/DISPLAY CONTROLLER)
IC7502
MN1280-L
(IC7501 RESET)
RESET
U7501 SPS-420-6
IR RECEIVER
+5V OUT GND
IR WIRELESS RECEIVING DETECTOR UNIT
JK7151
VIDEO IN
AUDIO IN
IC7161
UPC4570
(OP AMP
DP7501
VSZS0108
(DISPLAY TUBE)
TP7506
TP7505
OSD-CS(L)
KEY DATA 3
KEY DATA 2
KEY DATA 1
KEY DATA 0
SCAN 3
SCAN 2
VCR+DATA /SCAN 1
VCR+CS /SCAN 0
SCAN 5
DTS INT/BUSY (L)
CS1(SYS.CTL)
TV(H)/VCR(L)
SIGNAL LINE(H)
SIGNAL (L)
IR DATA
SERIAL DATA 1
SERIAL DATA 0
SERIAL CLOCK 0
POWER DOWN(L)
SEGMENT a
SEGMENT b
SEGMENT c
SEGMENT d
KEY DATA 5
KEY DATA 6
KEY DATA 7
RESET
GRID 3G
GRID 2G
GRID 1G
INPUT SELECT 2
INPUT SELECT 1
SEGMENT k
V-LOAD
V-REF
SEGMENT j
SEGMENT i
SEGMENT h
SEGMENT g
SEGMENT f
SEGMENT e
VDD
4.19MHz
D7151 MA4051-M (5.1V)
D7152 MA4051-M (5.1V)
D7527 MA4091N-M (9.1V)
D7528 MA4051-M (5.1V)
REC
TIMER
VCR
STEREO
SAP
Hi-Fi
AM
PM
F+ F+ 3G 2G 1G k j i h g f e d c b a F- F-
G
H
I
J
K
L
M
N

RE PART NUMBER IS SHOWN
S DRAWING WAS PREPARED.
NLY ORIGINAL REPLACEMENT PARTS
TH SERVICE MANUAL.

NOTE: HOW TO READ CONVERGED LINES
(100) B4
LOCATION GRID NUMBER OF THE OTHER END OF THE LINE
LINE NUMBER

TEST POINT INFORMATION
⦶ : TEST POINT WITH A JUMPER WIRE ACROSS A HOLE IN THE P.C.B.
▭→ : TEST POINT WITH A COMPONENT LEAD ON THE FOIL SIDE.
⊘ : TEST POINT WITH NO TEST PIN.
● : TEST POINT WITH A TEST PIN.


U7501 SPS-420-6
IR RECEIVER
+5V OUT GND
IR WIRELESS RECEIVING DETECTOR UNIT
R7534 1K
C7523 1000P
R7531 1K
R7532 1K
R7533 1K
SERIAL DATA 0
SERIAL CLOCK 0
POWER DOWN(L)
SEGMENT a
SEGMENT b
SEGMENT c
SEGMENT d
SEGMENT j
SEGMENT i
SEGMENT h
SEGMENT g
SEGMENT f
SEGMENT e
VDD
JK7151
VIDEO IN
AUDIO IN
D7151 MA4051-M (5.1V)
D7152 MA4051-M (5.1V)
R7151 75
R7162 5600
R7163 47K
C7163 0.01
R7164 47K
C7162 0.01
IC7161 UPC4570G2-T1 (OP AMP)
V-
V+
P7502
TO MAIN II
AUDIO 2 L CH
UNSW +5.6V
AUDIO 2 R CH
GND
UNSW -6.8V
VIDEO 2
P7501
TO MAIN I
UNSW +5V(SYS.CTL)
OSD-CS(L)
DTS INT/BUSY(L)
CS1(SYS.CTL)
TV(H)/VCR(L)
SIGNAL LINE(H)
SIGNAL(L)
SERIAL DATA 1
SERIAL DATA 0
SERIAL CLOCK 0
POWER DOWN(L)
BACK-UP +5V
GND
INPUT SELECT 1
INPUT SELECT 2
F+
UNSW -30V
F-
C7519 100P
C7518 100P
D7527 MA4091N-M (9.1V)
C7517 0.01
C7515 0.1
C7516 100/6.3V
D7528 MA4051-M (5.1V)
R7543 47K
R7547 82 1/4W
R7548 75 1/4W
R7550 75 1/4W
DP7501 VSZS0108 (DISPLAY TUBE)
REC
TIMER
STEREO
VCR
SAP
Hi-Fi
AM
PM
3G 2G 1G
F+ F+ 3G 2G 1G k j i h g f e d c b a F- F-
VJBS07538
J
K
L
M
N
O
P
Q

IC7501 KEY MATRIX CHART

KEY DATA IN	SCAN OUT		
	SCAN 0 (PIN 21)	SCAN 1 (PIN 22)	SCAN 2 (PIN23)
KEY DATA 4 (PIN 35)	STOP/EJECT	PLAY/X2	POWER
KEY DATA 5 (PIN 36)	TV/VCR	REC	PAUSE/STILL
KEY DATA 6 (PIN 37)	REW/REVIEW	-----	CH UP
KEY DATA 7 (PIN 38)	FF/CUE	-----	CH DOWN

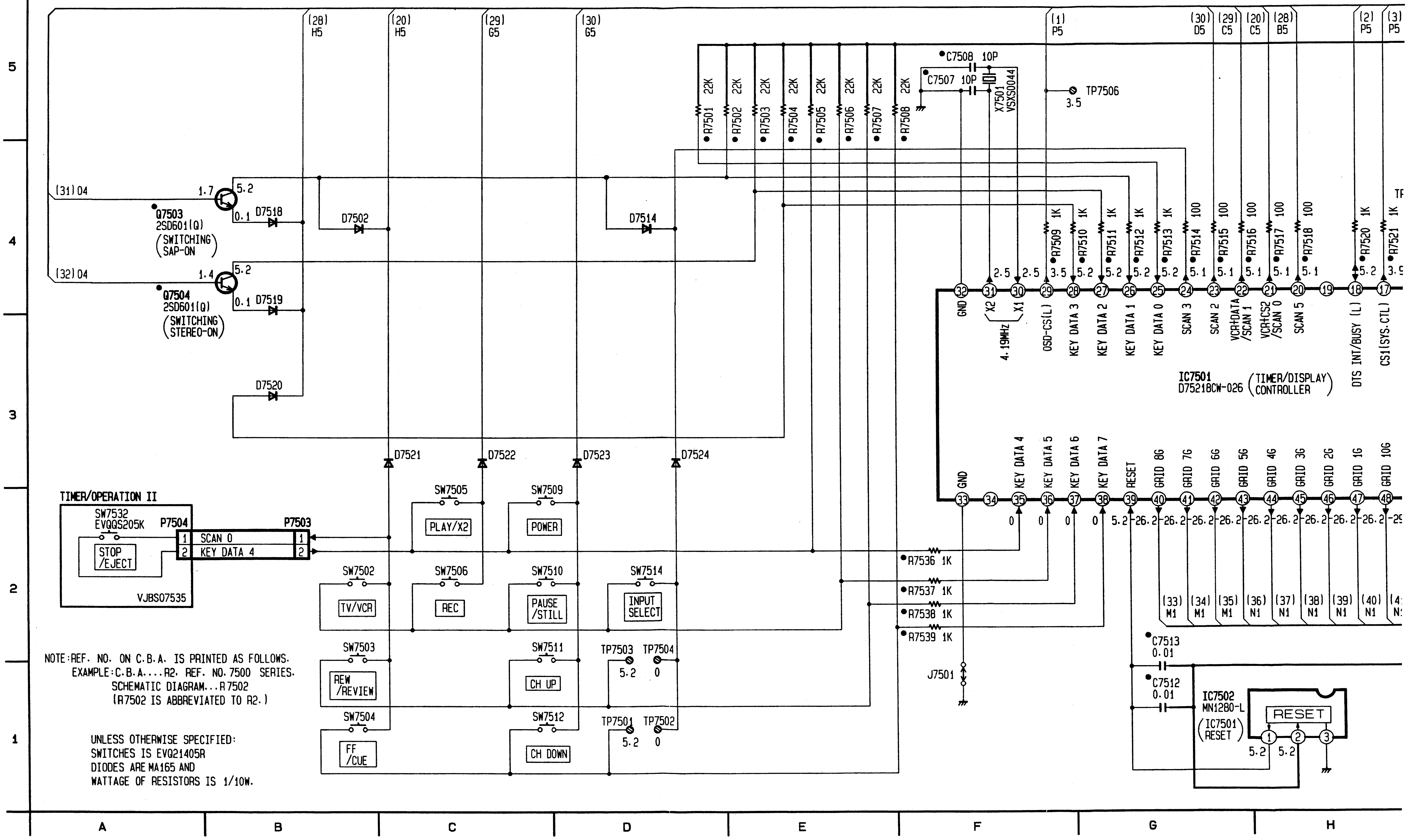
COMPARISON CHART
OF MODELS & MARKS

MODEL	MARK
PV-4308	A
PV-4311	B
PV-4311-K	C
PV-4315S	D
PV-4325S	E
PV-4351	F
PV-4351-K	G
PV-4358	H
PV-4355S	I

TIMER/OPERATION I/II SCHEMATIC DIAGRAM (I)

NOTE: THE MARK "•" INDICATES LEADLESS
(CHIP) COMPONENTS.

NOTE:
1. DO NOT USE THE PART NUMBER
IN THE PARTS LIST, AND MAY
2. TO MAINTAIN ORIGINAL FUNCTI
WHICH ARE LISTED WITH THEIR



5
4
3
2
1
A
B
C
D
E
F
G
H
(28) H5
(20) H5
(29) G5
(30) G5
(1) P5
(30) D5
(29) C5
(20) C5
(28) B5
(2) P5
(3) P5
(31) 04
(32) 04
Q7503 2SD601(Q) (SWITCHING SAP-ON)
Q7504 2SD601(Q) (SWITCHING STEREO-ON)
1.7
5.2
0.1
1.4
D7518
D7519
D7502
D7514
D7520
D7521
D7522
D7523
D7524
R7501 22K
R7502 22K
R7503 22K
R7504 22K
R7505 22K
R7506 22K
R7507 22K
R7508 22K
C7508 10P
C7507 10P
X7501 VSX50044
TP7506
3.5
R7509 1K
R7510 1K
R7511 1K
R7512 1K
R7513 1K
R7514 100
R7515 100
R7516 100
R7517 100
R7518 100
R7520 1K
R7521 1K
2.5
2.5
3.5
5.2
5.2
5.2
5.2
5.1
5.1
5.1
5.1
5.1
5.2
GND
X2
X1
4.19MHz
OSD-CS(L)
KEY DATA 3
KEY DATA 2
KEY DATA 1
KEY DATA 0
SCAN 3
SCAN 2
VCR+DATA /SCAN 1
VCR+CS2 /SCAN 0
SCAN 5
DTS INT/BUSY (L)
CS1(SYS.CTL)
IC7501 D75218CW-026 (TIMER/DISPLAY CONTROLLER)
GND
KEY DATA 4
KEY DATA 5
KEY DATA 6
KEY DATA 7
RESET
GRID 8G
GRID 7G
GRID 6G
GRID 5G
GRID 4G
GRID 3G
GRID 2G
GRID 1G
GRID 10G
0
0
0
0
5.2
26.2
(33) M1
(34) M1
(35) M1
(36) N1
(37) N1
(38) N1
(39) N1
(40) N1
TIMER/OPERATION II
SW7532 EVQQS205K
P7504
P7503
STOP /EJECT
SCAN 0
KEY DATA 4
VJBS07535
SW7505 PLAY/X2
SW7509 POWER
SW7502 TV/VCR
SW7506 REC
SW7510 PAUSE /STILL
SW7514 INPUT SELECT
SW7503 REW /REVIEW
SW7511 CH UP
SW7504 FF /CUE
SW7512 CH DOWN
TP7503
TP7504
5.2
0
TP7501
TP7502
5.2
0
R7536 1K
R7537 1K
R7538 1K
R7539 1K
J7501
C7513 0.01
C7512 0.01
IC7502 MN1280-L (IC7501 RESET)
RESET
5.2
5.2

NOTE: REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE: C.B.A....R2. REF. NO. 7500 SERIES.
SCHEMATIC DIAGRAM...R7502
(R7502 IS ABBREVIATED TO R2.)

UNLESS OTHERWISE SPECIFIED:
SWITCHES IS EVQ21405R
DIODES ARE MA165 AND
WATTAGE OF RESISTORS IS 1/10W.

(II)

NOTE: THE MARK "•" INDICATES LEADLESS (CHIP) COMPONENTS.

NOTE:
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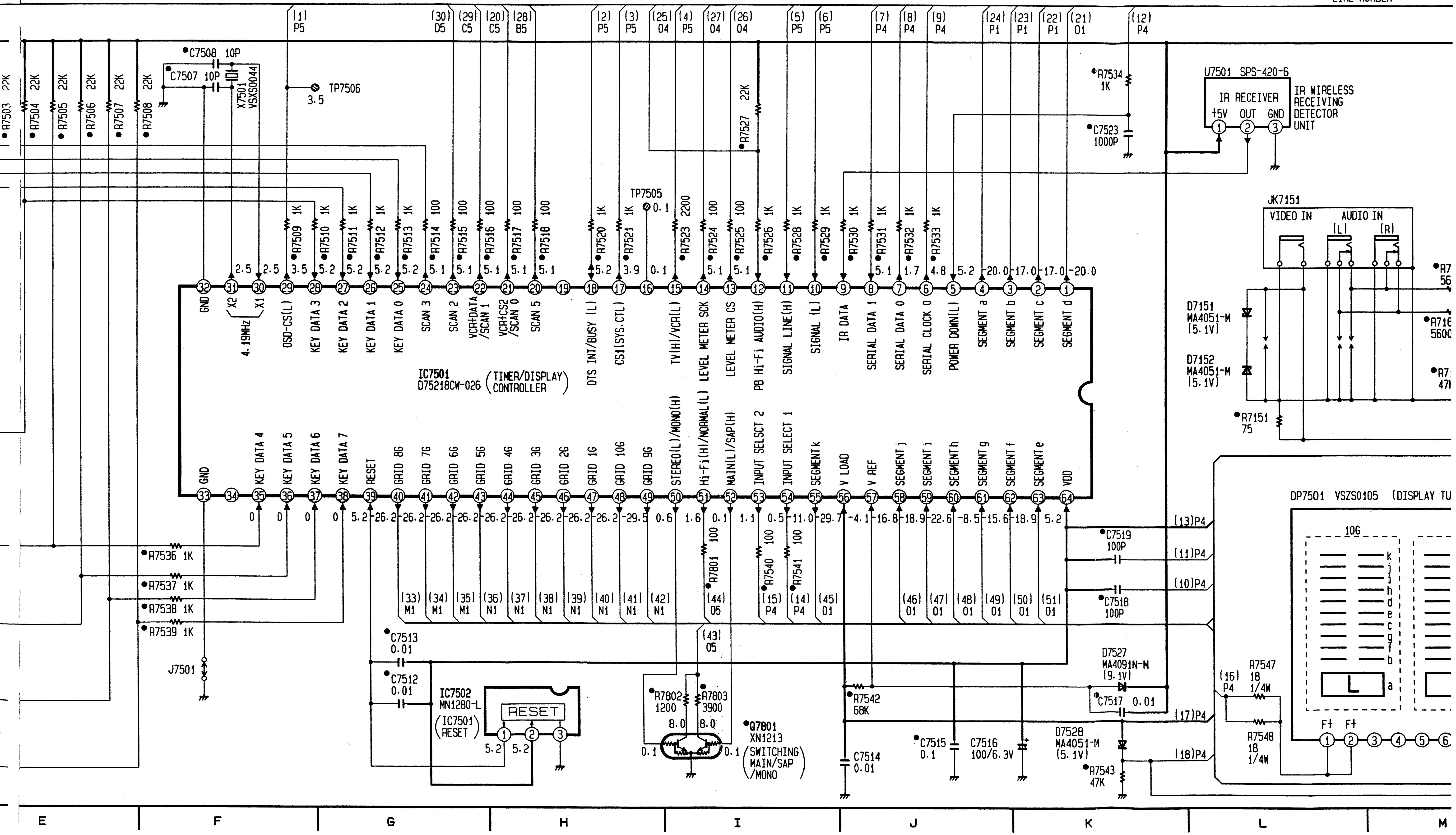
2. TO MAINTAIN ORIGINAL FUNCTION AND RELIABILITY OF REPAIRED UNITS, USE ONLY ORIGINAL REPLACEMENT PARTS WHICH ARE LISTED WITH THEIR PART NUMBERS IN THE PARTS LIST SECTION OF THE SERVICE MANUAL.

NOTE: HOW TO READ CONVERGED LINES
(100) B4
LOCATION GRID NUMBER OI
LINE NUMBER

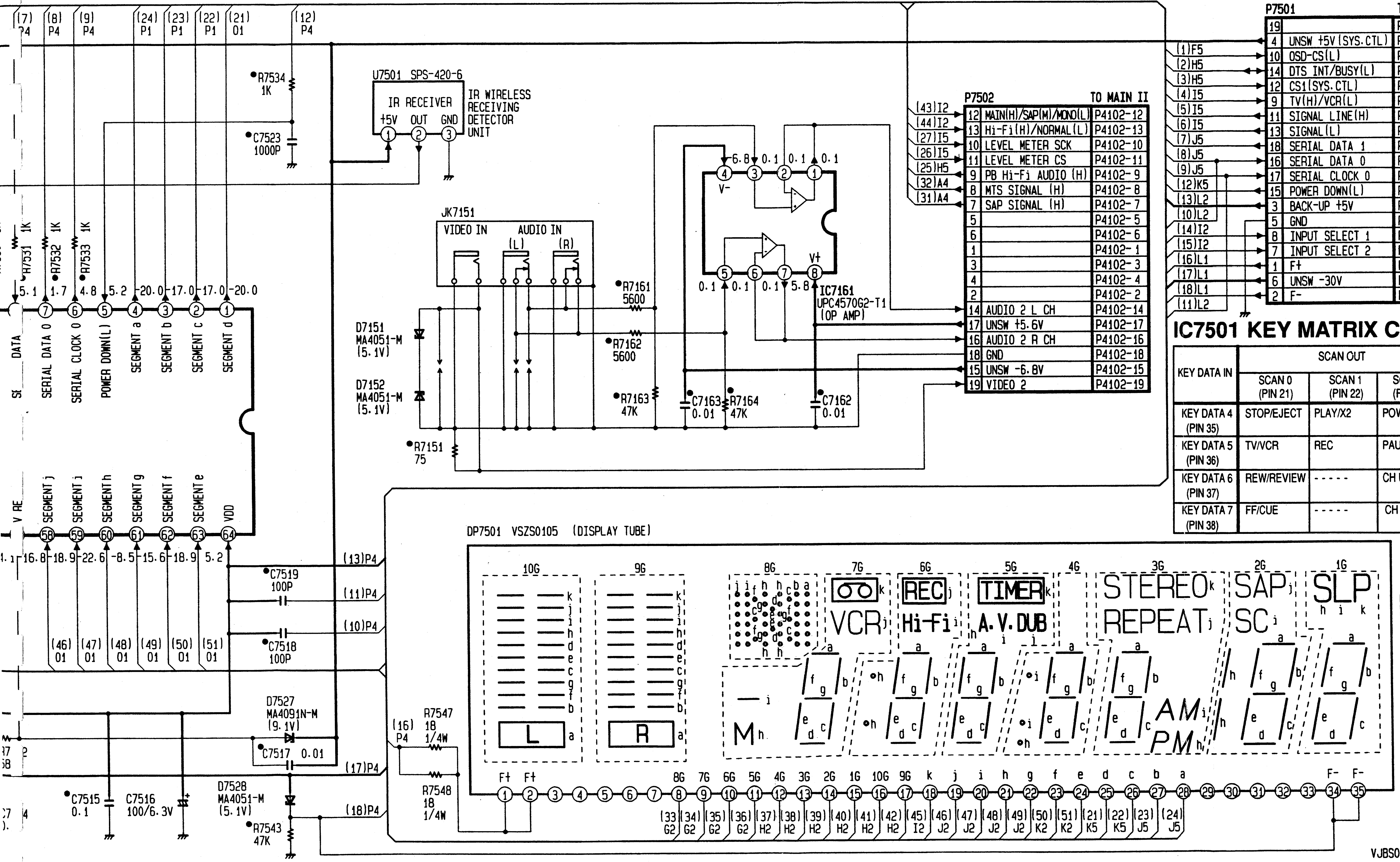


IC7501
D75218CW-026 (TIMER/DISPLAY CONTROLLER)
IC7502
MN1280-L
RESET
(IC7501 RESET)
Q7801
XN1213
(SWITCHING MAIN/SAP /MONO)
U7501 SPS-420-6
IR RECEIVER
+5V OUT GND
IR WIRELESS RECEIVING DETECTOR UNIT
JK7151
VIDEO IN
AUDIO IN
(L) (R)
DP7501 VSZS0105 (DISPLAY TU
D7151 MA4051-M (5.1V)
D7152 MA4051-M (5.1V)
D7527 MA4091N-M (9.1V)
D7528 MA4051-M (5.1V)
X7501 VSXS0044
4.19MHz
C7508 10P
C7507 10P
C7523 1000P
C7519 100P
C7518 100P
C7517 0.01
C7513 0.01
C7512 0.01
C7514 0.01
C7515 0.1
C7516 100/6.3V
R7534 1K
R7527 22K
R7542 68K
R7543 47K
R7547 18 1/4W
R7548 18 1/4W
R7151 75
R7802 1200
R7803 3900
R7801 100
R7540 100
R7541 100
R7536 1K
R7537 1K
R7538 1K
R7539 1K
R7503 R7504 R7505 R7506 R7507 R7508 22K
R7509 R7510 R7511 R7512 R7513 1K
R7514 R7515 R7516 R7517 R7518 100
R7520 R7521 1K
R7523 2200
R7524 R7525 100
R7526 R7528 R7529 R7530 R7531 R7532 R7533 1K
TP7506 3.5
TP7505 0.1
J7501
GND
X2
X1
OSD-CS(L)
KEY DATA 3
KEY DATA 2
KEY DATA 1
KEY DATA 0
SCAN 3
SCAN 2
VCR+DATA /SCAN 1
VCR+CS2 /SCAN 0
SCAN 5
DTS INT/BUSY (L)
CS1(SYS.CTL)
TV(H)/VCR(L)
LEVEL METER SCK
LEVEL METER CS
PB Hi-Fi AUDIO(H)
SIGNAL LINE(H)
SIGNAL (L)
IR DATA
SERIAL DATA 1
SERIAL DATA 0
SERIAL CLOCK 0
POWER DOWN(L)
SEGMENT a
SEGMENT b
SEGMENT c
SEGMENT d
KEY DATA 4
KEY DATA 5
KEY DATA 6
KEY DATA 7
RESET
GRID 8G
GRID 7G
GRID 6G
GRID 5G
GRID 4G
GRID 3G
GRID 2G
GRID 1G
GRID 10G
GRID 9G
STEREO(L)/MONO(H)
Hi-Fi(H)/NORMAL(L)
MAIN(L)/SAP(H)
INPUT SELSCT 2
INPUT SELECT 1
SEGMENT k
V LOAD
V REF
SEGMENT j
SEGMENT i
SEGMENT h
SEGMENT g
SEGMENT f
SEGMENT e
VDD
(1) P5
(30) D5
(29) C5
(20) C5
(28) B5
(2) P5
(3) P5
(25) 04
(4) P5
(27) 04
(26) 04
(5) P5
(6) P5
(7) P4
(8) P4
(9) P4
(24) P1
(23) P1
(22) P1
(21) 01
(12) P4
(33) M1
(34) M1
(35) M1
(36) N1
(37) N1
(38) N1
(39) N1
(40) N1
(41) N1
(42) N1
(44) 05
(43) 05
(15) P4
(14) P4
(45) 01
(46) 01
(47) 01
(48) 01
(49) 01
(50) 01
(51) 01
(13) P4
(11) P4
(10) P4
(17) P4
(18) P4
(16) P4
10G
F+ F+
E
F
G
H
I
J
K
L
M

CC ECT PART NUMBER IS SHOWN
HIS DRAWING WAS PREPARED.
C"'Y ORIGINAL REPLACEMENT PARTS
OF HE SERVICE MANUAL.

NOTE: HOW TO READ CONVERGED LINES
(100) B4
LOCATION GRID NUMBER OF THE OTHER END OF THE LINE
LINE NUMBER

TEST POINT INFORMATION
- ⦶ : TEST POINT WITH A JUMPER WIRE ACROSS A HOLE IN THE P.C.B.
- ▭→ : TEST POINT WITH A COMPONENT LEAD ON THE FOIL SIDE.
- ⊘ : TEST POINT WITH NO TEST PIN.
- ● : TEST POINT WITH A TEST PIN.



U7501 SPS-420-6
IR RECEIVER
+5V OUT GND
IR WIRELESS RECEIVING DETECTOR UNIT
R7534 1K
C7523 1000P
R7531 1K
R7532 1K
R7533 1K
DATA
SERIAL DATA 0
SERIAL CLOCK 0
POWER DOWN(L)
SEGMENT a
SEGMENT b
SEGMENT c
SEGMENT d
SEGMENT j
SEGMENT i
SEGMENT h
SEGMENT g
SEGMENT f
SEGMENT e
VDD
JK7151
VIDEO IN
AUDIO IN (L) (R)
D7151 MA4051-M (5.1V)
D7152 MA4051-M (5.1V)
R7161 5600
R7162 5600
R7163 47K
R7151 75
C7163 0.01
R7164 47K
C7162 0.01
IC7161 UPC4570G2-T1 (OP AMP)
P7502
TO MAIN II
12 MAIN(H)/SAP(M)/MONO(L) P4102-12
13 Hi-Fi(H)/NORMAL(L) P4102-13
10 LEVEL METER SCK P4102-10
11 LEVEL METER CS P4102-11
9 PB Hi-Fi AUDIO (H) P4102-9
8 MTS SIGNAL (H) P4102-8
7 SAP SIGNAL (H) P4102-7
5 P4102-5
6 P4102-6
1 P4102-1
3 P4102-3
4 P4102-4
2 P4102-2
14 AUDIO 2 L CH P4102-14
17 UNSW +5.6V P4102-17
16 AUDIO 2 R CH P4102-16
18 GND P4102-18
15 UNSW -6.8V P4102-15
19 VIDEO 2 P4102-19
P7501
TO MAIN I
19 P6001-19
4 UNSW +5V(SYS.CTL) P6001-4
10 OSD-CS(L) P6001-10
14 DTS INT/BUSY(L) P6001-14
12 CS1(SYS.CTL) P6001-12
9 TV(H)/VCR(L) P6001-9
11 SIGNAL LINE(H) P6001-11
13 SIGNAL(L) P6001-13
18 SERIAL DATA 1 P6001-18
16 SERIAL DATA 0 P6001-16
17 SERIAL CLOCK 0 P6001-17
15 POWER DOWN(L) P6001-15
3 BACK-UP +5V P6001-3
5 GND P6001-5
8 INPUT SELECT 1 P6001-8
7 INPUT SELECT 2 P6001-7
1 F+ P6001-1
6 UNSW -30V P6001-6
2 F- P6001-2
C7519 100P
C7518 100P
D7527 MA4091N-M (9.1V)
C7517 0.01
C7515 0.1
C7516 100/6.3V
D7528 MA4051-M (5.1V)
R7543 47K
R7547 18 1/4W
R7548 18 1/4W
DP7501 VSZS0105 (DISPLAY TUBE)
10G 9G 8G 7G 6G 5G 4G 3G 2G 1G
L R
VCR REC Hi-Fi TIMER A.V.DUB STEREO REPEAT SAP SC SLP AM PM M
F+ F+ 8G 7G 6G 5G 4G 3G 2G 1G 10G 9G k j i h g f e d c b a F- F-
J K L M N O P Q
VJBS07530

IC7501 KEY MATRIX CHART

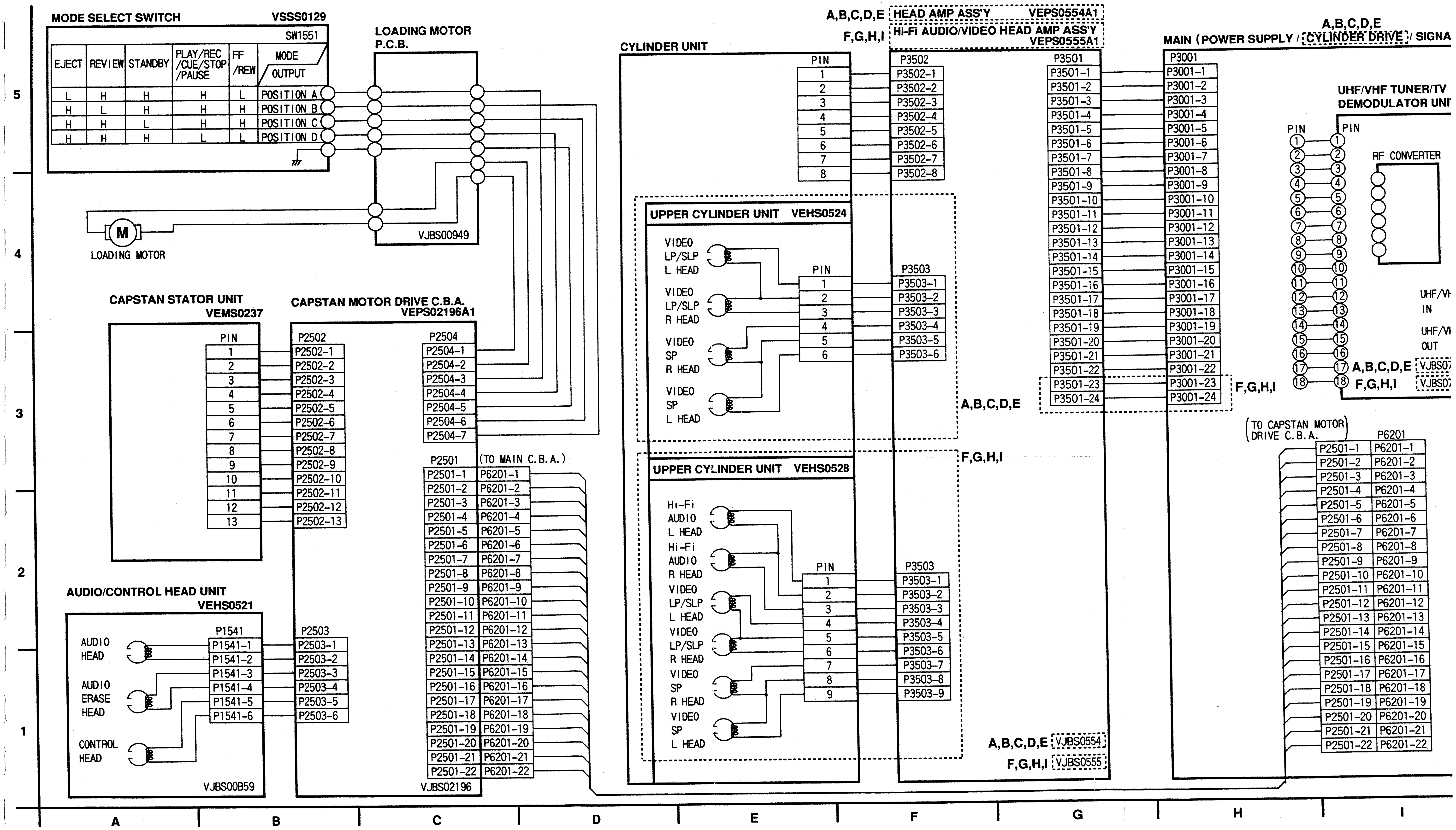
KEY DATA IN	SCAN OUT			
	SCAN 0 (PIN 21)	SCAN 1 (PIN 22)	SCAN 2 (PIN 23)	SCAN 3 (PIN 24)
KEY DATA 4 (PIN 35)	STOP/EJECT	PLAY/X2	POWER	-----
KEY DATA 5 (PIN 36)	TV/VCR	REC	PAUSE/STILL	INPUT SELECT
KEY DATA 6 (PIN 37)	REW/REVIEW	-----	CH UP	-----
KEY DATA 7 (PIN 38)	FF/CUE	-----	CH DOWN	-----

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-4308	A
PV-4311	B
PV-4311-K	C
PV-4315S	D
PV-4325S	E
PV-4351	F
PV-4351-K	G
PV-4358	H
PV-4355S	I

INTERCONNECTION SCHEMATIC DIAGRAM

NOTE:
1. DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING IN THE PARTS LIST. AND MAY BE SLIGHTLY DIFFERENT
2. TO MAINTAIN ORIGINAL FUNCTION AND RELIABILITY OF WHICH ARE LISTED WITH THEIR PART NUMBERS IN THE



MODE SELECT SWITCH VSSS0129
SW1551
LOADING MOTOR P.C.B.
VJBS00949
M
LOADING MOTOR
CAPSTAN STATOR UNIT VEMS0237
CAPSTAN MOTOR DRIVE C.B.A. VEPS02196A1
PIN 1 2 3 4 5 6 7 8 9 10 11 12 13
P2502
P2502-1 … P2502-13
P2504
P2504-1 … P2504-7
P2501
P2501-1 … P2501-22
(TO MAIN C.B.A.)
P6201-1 … P6201-22
P2503
P2503-1 … P2503-6
VJBS02196
AUDIO/CONTROL HEAD UNIT VEHS0521
AUDIO HEAD
AUDIO ERASE HEAD
CONTROL HEAD
P1541
P1541-1 … P1541-6
VJBS00B59
CYLINDER UNIT
A,B,C,D,E HEAD AMP ASS'Y VEPS0554A1
F,G,H,I Hi-Fi AUDIO/VIDEO HEAD AMP ASS'Y VEPS0555A1
PIN 1 2 3 4 5 6 7 8
P3502
P3502-1 … P3502-8
P3501
P3501-1 … P3501-24
UPPER CYLINDER UNIT VEHS0524
VIDEO LP/SLP L HEAD
VIDEO LP/SLP R HEAD
VIDEO SP R HEAD
VIDEO SP L HEAD
PIN 1 2 3 4 5 6
P3503
P3503-1 … P3503-6
A,B,C,D,E
F,G,H,I
UPPER CYLINDER UNIT VEHS0528
Hi-Fi AUDIO L HEAD
Hi-Fi AUDIO R HEAD
VIDEO LP/SLP L HEAD
VIDEO LP/SLP R HEAD
VIDEO SP R HEAD
VIDEO SP L HEAD
PIN 1 2 3 4 5 6 7 8 9
P3503
P3503-1 … P3503-9
A,B,C,D,E VJBS0554
F,G,H,I VJBS0555
A,B,C,D,E
MAIN (POWER SUPPLY / CYLINDER DRIVE / SIGNA
P3001
P3001-1 … P3001-24
F,G,H,I
UHF/VHF TUNER/TV DEMODULATOR UNI
PIN
PIN
① … ⑱
RF CONVERTER
UHF/VH IN
UHF/VH OUT
A,B,C,D,E VJBS07
F,G,H,I VJBS07
(TO CAPSTAN MOTOR DRIVE C.B.A.
P6201
P2501-1 … P2501-22
P6201-1 … P6201-22
1 2 3 4 5
A B C D E F G H I

EJECT	REVIEW	STANDBY	PLAY/REC /CUE/STOP /PAUSE	FF /REW	MODE / OUTPUT
L	H	H	H	L	POSITION A
H	L	H	H	H	POSITION B
H	H	L	H	H	POSITION C
H	H	H	L	L	POSITION D

NOTE:

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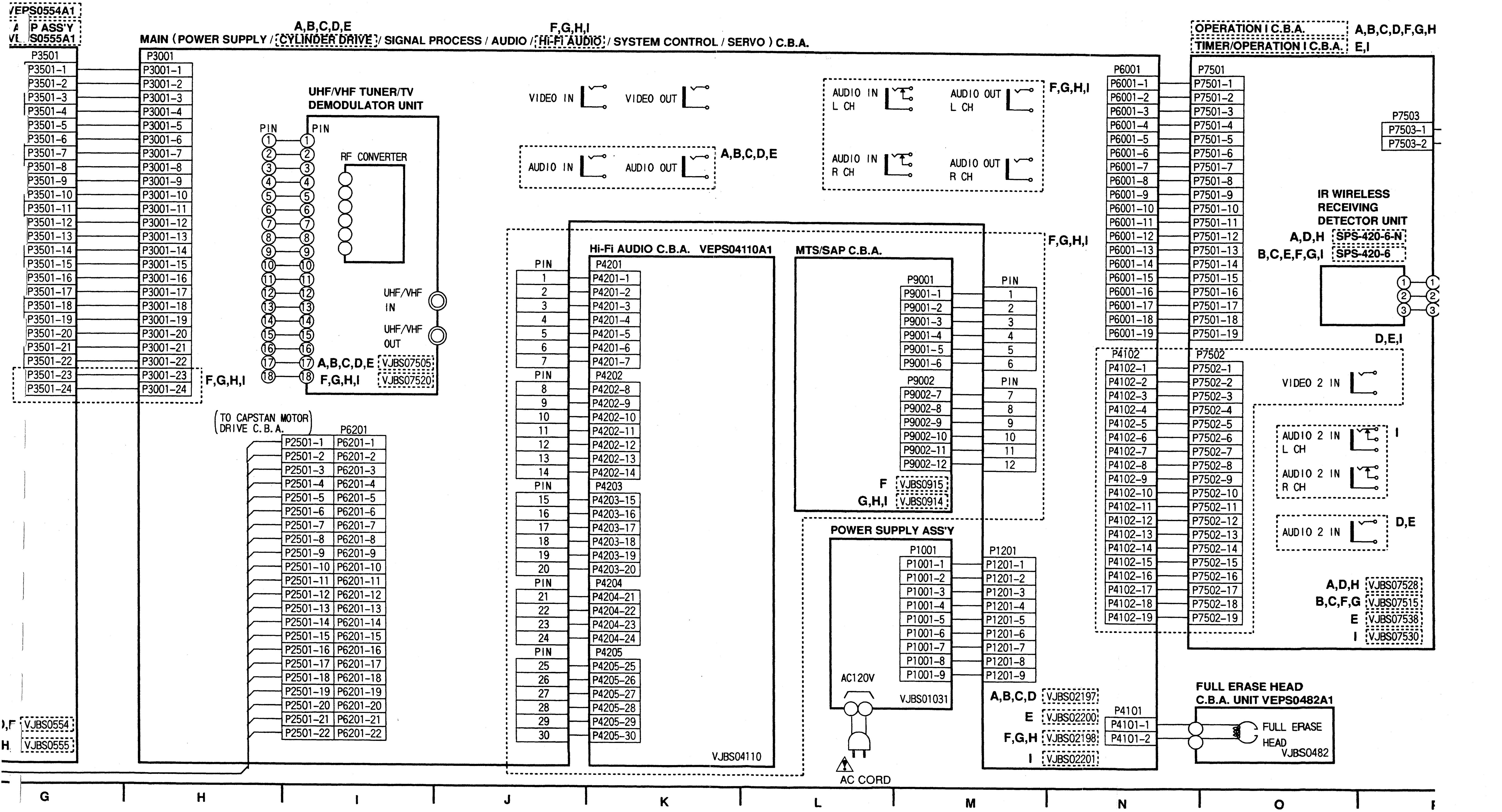
2. TO MAINTAIN ORIGINAL FUNCTION AND RELIABILITY OF REPAIRED UNITS, USE ONLY ORIGINAL REPLACEMENT PARTS WHICH ARE LISTED WITH THEIR PART NUMBERS IN THE PARTS LIST SECTION OF THE SERVICE MANUAL.

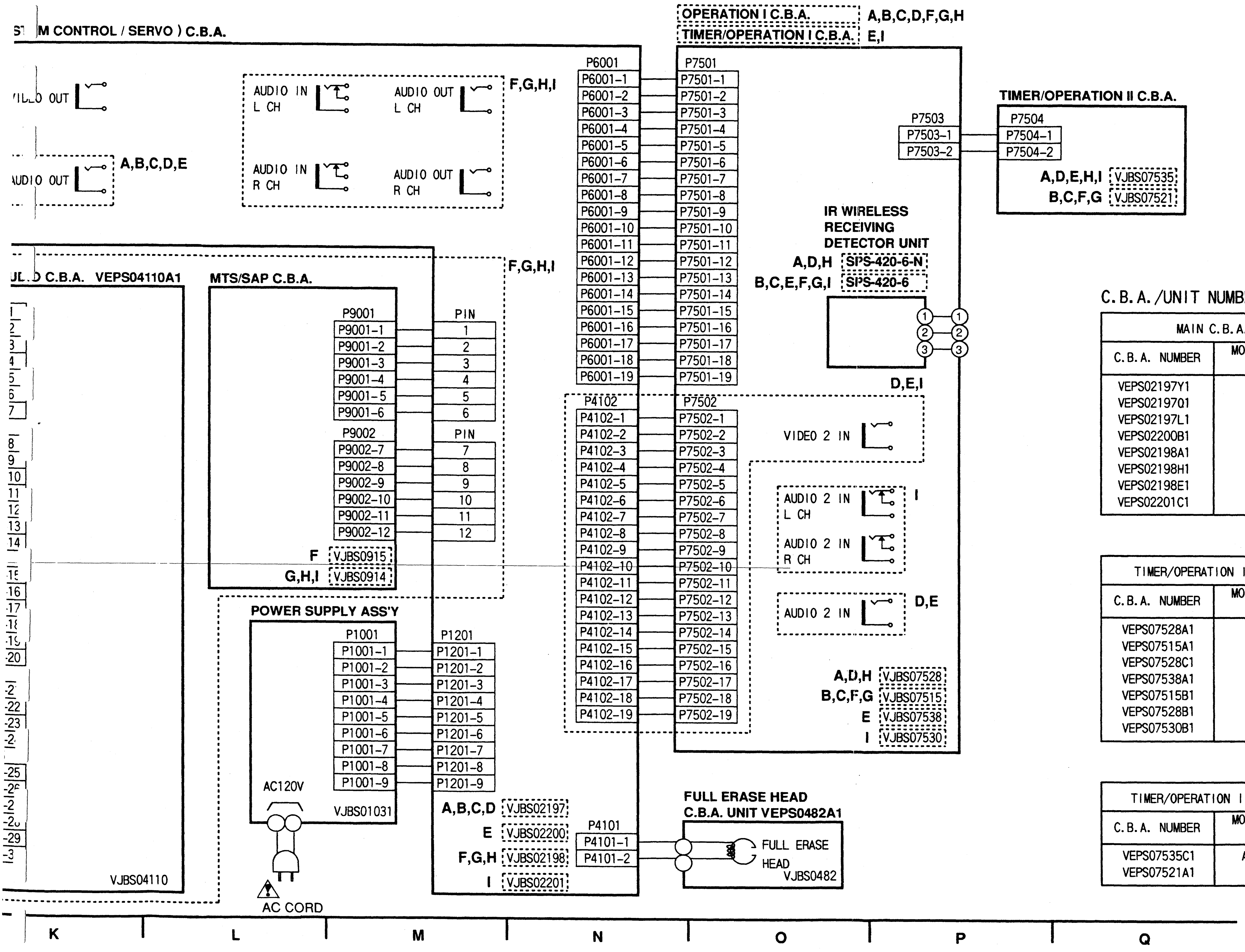
IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.



VEPS0554A1
P ASS'Y
S0555A1
P3501
P3501-1 … P3501-24
A,B,C,D,E
F,G,H,I
MAIN (POWER SUPPLY / CYLINDER DRIVE / SIGNAL PROCESS / AUDIO / Hi-Fi AUDIO / SYSTEM CONTROL / SERVO) C.B.A.
P3001
P3001-1 … P3001-24
F,G,H,I
UHF/VHF TUNER/TV DEMODULATOR UNIT
PIN
RF CONVERTER
UHF/VHF IN
UHF/VHF OUT
A,B,C,D,E VJBS07505
F,G,H,I VJBS07520
(TO CAPSTAN MOTOR DRIVE C.B.A.)
P6201
P2501-1 … P2501-22
P6201-1 … P6201-22
VJBS0554
VJBS0555
VIDEO IN
VIDEO OUT
AUDIO IN
AUDIO OUT
A,B,C,D,E
AUDIO IN L CH
AUDIO OUT L CH
AUDIO IN R CH
AUDIO OUT R CH
F,G,H,I
Hi-Fi AUDIO C.B.A. VEPS04110A1
P4201
P4201-1 … P4201-7
P4202
P4202-8 … P4202-14
P4203
P4203-15 … P4203-20
P4204
P4204-21 … P4204-24
P4205
P4205-25 … P4205-30
VJBS04110
MTS/SAP C.B.A.
P9001
P9001-1 … P9001-6
P9002
P9002-7 … P9002-12
F VJBS0915
G,H,I VJBS0914
POWER SUPPLY ASS'Y
P1001
P1001-1 … P1001-9
P1201
P1201-1 … P1201-9
AC120V
VJBS01031
AC CORD
A,B,C,D VJBS02197
E VJBS02200
F,G,H VJBS02198
I VJBS02201
P4101
P4101-1
P4101-2
FULL ERASE HEAD C.B.A. UNIT VEPS0482A1
FULL ERASE HEAD
VJBS0482
P6001
P6001-1 … P6001-19
P4102
P4102-1 … P4102-19
OPERATION I C.B.A. A,B,C,D,F,G,H
TIMER/OPERATION I C.B.A. E,I
P7501
P7501-1 … P7501-19
P7502
P7502-1 … P7502-19
P7503
P7503-1
P7503-2
IR WIRELESS RECEIVING DETECTOR UNIT
A,D,H SPS-420-6-N
B,C,E,F,G,I SPS-420-6
D,E,I
VIDEO 2 IN
AUDIO 2 IN L CH
AUDIO 2 IN R CH
I
AUDIO 2 IN
D,E
A,D,H VJBS07528
B,C,F,G VJBS07515
E VJBS07538
I VJBS07530
G
H
I
J
K
L
M
N
O

DWN
ED.
T PARTS

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE
SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS,
USE ONLY THE SPECIFIED PARTS.


M CONTROL / SERVO) C.B.A.
OPERATION I C.B.A.
A,B,C,D,F,G,H
TIMER/OPERATION I C.B.A.
E,I
VIDEO OUT
AUDIO OUT
A,B,C,D,E
AUDIO IN L CH
AUDIO OUT L CH
AUDIO IN R CH
AUDIO OUT R CH
F,G,H,I
P6001
P6001-1
P6001-2
P6001-3
P6001-4
P6001-5
P6001-6
P6001-7
P6001-8
P6001-9
P6001-10
P6001-11
P6001-12
P6001-13
P6001-14
P6001-15
P6001-16
P6001-17
P6001-18
P6001-19
P7501
P7501-1
P7501-2
P7501-3
P7501-4
P7501-5
P7501-6
P7501-7
P7501-8
P7501-9
P7501-10
P7501-11
P7501-12
P7501-13
P7501-14
P7501-15
P7501-16
P7501-17
P7501-18
P7501-19
P7503
P7503-1
P7503-2
TIMER/OPERATION II C.B.A.
P7504
P7504-1
P7504-2
A,D,E,H,I
VJBS07535
B,C,F,G
VJBS07521
IR WIRELESS RECEIVING DETECTOR UNIT
A,D,H
SPS-420-6-N
B,C,E,F,G,I
SPS-420-6
1
2
3
D,E,I
.D C.B.A. VEPS04110A1
MTS/SAP C.B.A.
P9001
P9001-1
P9001-2
P9001-3
P9001-4
P9001-5
P9001-6
PIN
1
2
3
4
5
6
P9002
P9002-7
P9002-8
P9002-9
P9002-10
P9002-11
P9002-12
PIN
7
8
9
10
11
12
F
VJBS0915
G,H,I
VJBS0914
P4102
P4102-1
P4102-2
P4102-3
P4102-4
P4102-5
P4102-6
P4102-7
P4102-8
P4102-9
P4102-10
P4102-11
P4102-12
P4102-13
P4102-14
P4102-15
P4102-16
P4102-17
P4102-18
P4102-19
P7502
P7502-1
P7502-2
P7502-3
P7502-4
P7502-5
P7502-6
P7502-7
P7502-8
P7502-9
P7502-10
P7502-11
P7502-12
P7502-13
P7502-14
P7502-15
P7502-16
P7502-17
P7502-18
P7502-19
VIDEO 2 IN
AUDIO 2 IN L CH
AUDIO 2 IN R CH
I
AUDIO 2 IN
D,E
A,D,H
VJBS07528
B,C,F,G
VJBS07515
E
VJBS07538
I
VJBS07530
POWER SUPPLY ASS'Y
P1001
P1001-1
P1001-2
P1001-3
P1001-4
P1001-5
P1001-6
P1001-7
P1001-8
P1001-9
P1201
P1201-1
P1201-2
P1201-3
P1201-4
P1201-5
P1201-6
P1201-7
P1201-8
P1201-9
AC120V
VJBS01031
AC CORD
VJBS04110
A,B,C,D
VJBS02197
E
VJBS02200
F,G,H
VJBS02198
I
VJBS02201
P4101
P4101-1
P4101-2
FULL ERASE HEAD C.B.A. UNIT VEPS0482A1
FULL ERASE HEAD
VJBS0482
K
L
M
N
O
P
Q

COMPARISON CHART
OF MODELS & MARKS

MODEL	MARK
PV-4308	A
PV-4311	B
PV-4311-K	C
PV-4315S	D
PV-4325S	E
PV-4351	F
PV-4351-K	G
PV-4358	H
PV-4355S	I

C.B.A./UNIT NUMBER CHART

MAIN C.B.A.	
C.B.A. NUMBER	MODEL NUMBER MARK
VEPS02197Y1	A, B
VEPS02197Q1	C
VEPS02197L1	D
VEPS02200B1	E
VEPS02198A1	F
VEPS02198H1	G
VEPS02198E1	H
VEPS02201C1	I

TIMER/OPERATION I C.B.A.	
C.B.A. NUMBER	MODEL NUMBER MARK
VEPS07528A1	A
VEPS07515A1	B, C
VEPS07528C1	D
VEPS07538A1	E
VEPS07515B1	F, G
VEPS07528B1	H
VEPS07530B1	I

TIMER/OPERATION II C.B.A.	
C.B.A. NUMBER	MODEL NUMBER MARK
VEPS07535C1	A, D, E, H, I
VEPS07521A1	B, C, F, G

MTS/SAP C.B.A.	
C.B.A. NUMBER	MODEL NUMBER MARK
VEPS0915A1	F
VEPS0914A1	G, H, I

POWER SUPPLY ASS'Y	
ASS'Y NUMBER	MODEL NUMBER MARK
VEPS01031B2	A, B, C, D, E
VEPS01031D2	F, G, H, I

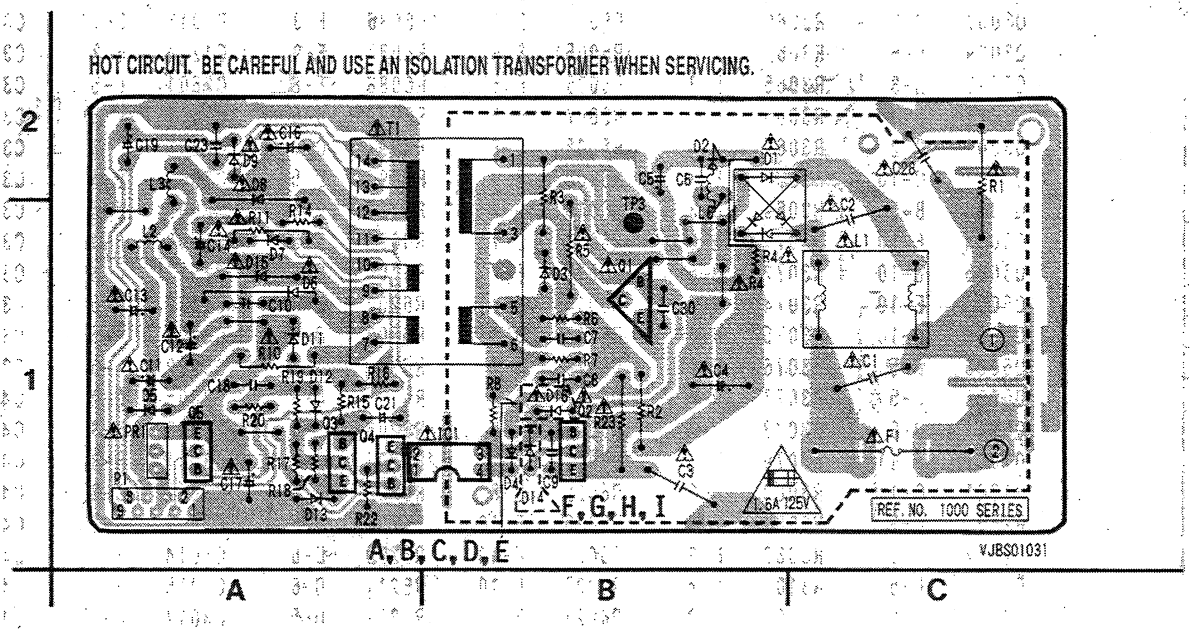
CLYLINDER UNIT	
UNIT NUMBER	MODEL NUMBER MARK
VEGS0348	A, B, C, D, E
VEGS0363	F, G, H, I

UHF/VHF TUNER/TV DEMODULATOR UNIT	
UNIT NUMBER	MODEL NUMBER MARK
VEQS0553	A, B, C, D, E
VEQS0559	F, G, H, I

IV. CIRCUIT BOARD DIAGRAMS

POWER SUPPLY ASS'Y VEPS01031B2 (A,B,C,D,E) / VEPS01031D2 (F,G,H,I)

HOT CIRCUIT. BE CAREFUL AND USE AN ISOLATION TRANSFORMER WHEN SERVICING.


2
1
A
B
C
T1
F1
1.6A 125V
TP3
IC1
PR1
P1
F, G, H, I
A, B, C, D, E
REF. NO. 1000 SERIES
VJBS01031

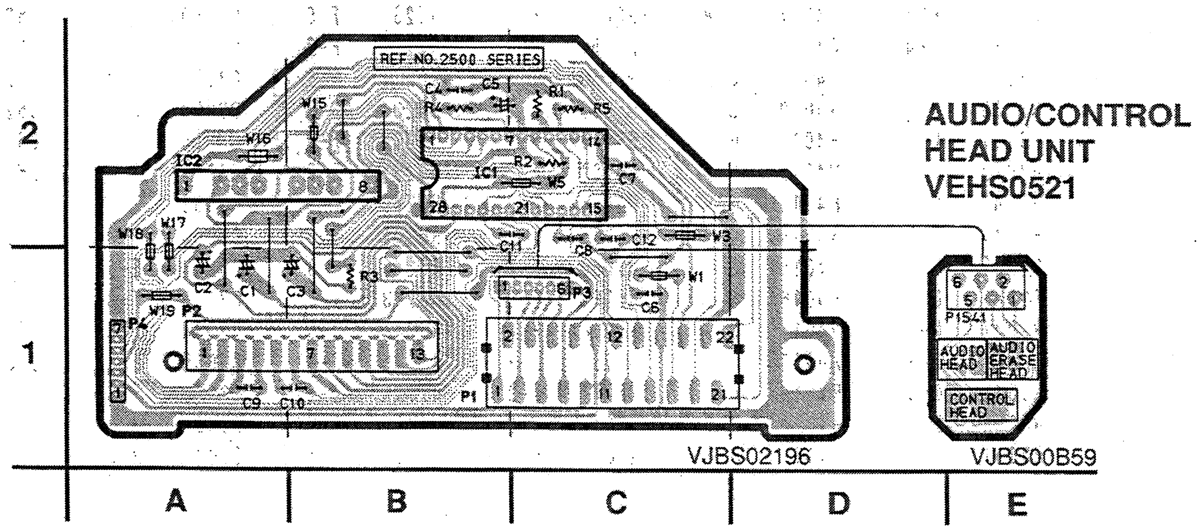
IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS,
USE ONLY THE SPECIFIED PARTS.

POWER SUPPLY	
TRANSISTOR	
Q1	B-1
Q2	B-1
Q3	A-1
Q4	A-1
Q5	A-1
IC	
IC1	B-1
CONNECTOR	
P1	A-1
TEST POINT	
TP1	B-1

CAPSTAN MOTOR DRIVE C.B.A. VEPS02196A1

NOTE:
MARK "W" ON THE CAPSTAN MOTOR DRIVE C.B.A. INDICATES THAT 0 OHM RESISTOR OR WIRE IS USED.
WHEN REPLACING , A WIRE SHOULD BE SUBSTITUTED FOR THE 0 OHM RESISTOR.
(W2501 , W2503 , W2505 , W2515 , W2516 , W2517 , W2518 , W2519)

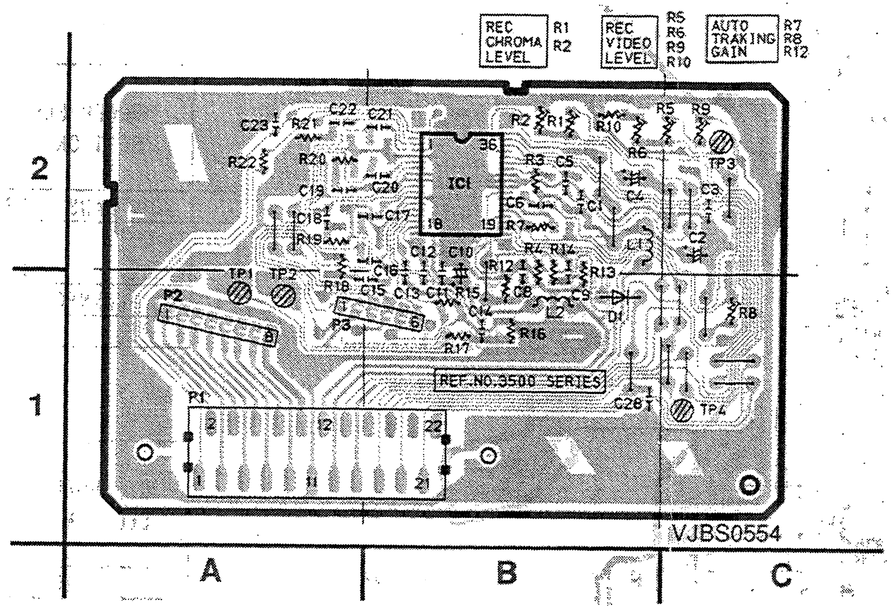
TEST POINT INFORMATION
- ⦶ : TEST POINT WITH A JUMPER WIRE ACROSS A HOLE IN P.C.B.
- ▭→ : TEST POINT WITH A COMPONENT LEAD ON THE FOIL SIDE.
- ⊘ : TEST POINT WITH NO TEST PIN.
- ● : TEST POINT WITH A TEST PIN.


2
1
REF.NO.2500 SERIES
IC1
IC2
P1
P2
P3
P4
AUDIO/CONTROL
HEAD UNIT
VEHS0521
P1541
AUDIO HEAD
AUDIO ERASE HEAD
CONTROL HEAD
VJBS02196
VJBS00B59
A
B
C
D
E

LEADLESS COMPONENT PARTS LOCATIO
CAPSTAN MOTOR DRIVE C. B. A.

R2501	C-2	C2507	C-2
R2502	C-2	C2508	C-1
R2503	B-1	C2509	A-1
R2504	B-2	C2510	B-1
R2505	C-2	C2511	C-2
C2504	B-2	C2512	C-2
C2506	C-1		

HEAD AMP ASS'Y VEPS0554A1 (A,B,C,D,E)


REC CHROMA LEVEL R1 R2
REC VIDEO LEVEL R5 R6 R9 R10
AUTO TRAKING GAIN R7 R8 R12
IC1
TP1
TP2
TP3
TP4
P1
P2
P3
REF.NO.3500 SERIES
VJBS0554
1
2
A
B
C

NOTE:
THE FOLLOWING PARTS ON THE HEAD AMP ASS'Y AND Hi-Fi AUDIO/VIDEO HEAD AMP ASS'Y ARE NOT SUPPLIED SEPARATELY.
PLEASE ORDER AND REPLACE WITH CIRCUIT BOARD ASSEMBLY INSTEAD OF INDIVIDUAL PARTS.
(IC3501 , R3501 , R3502 , R3505 , R3506 , R3507 , R3508 , R3509 , R3510 , R3512 , R3515 , R3516)

NOTE:
THE PARTS MARKED " 〰 " INDICATE THAT A TRIMMING ADJUSTMENT WAS MADE AT THE FACTORY.
DO NOT TRY TO READJUST THEM.

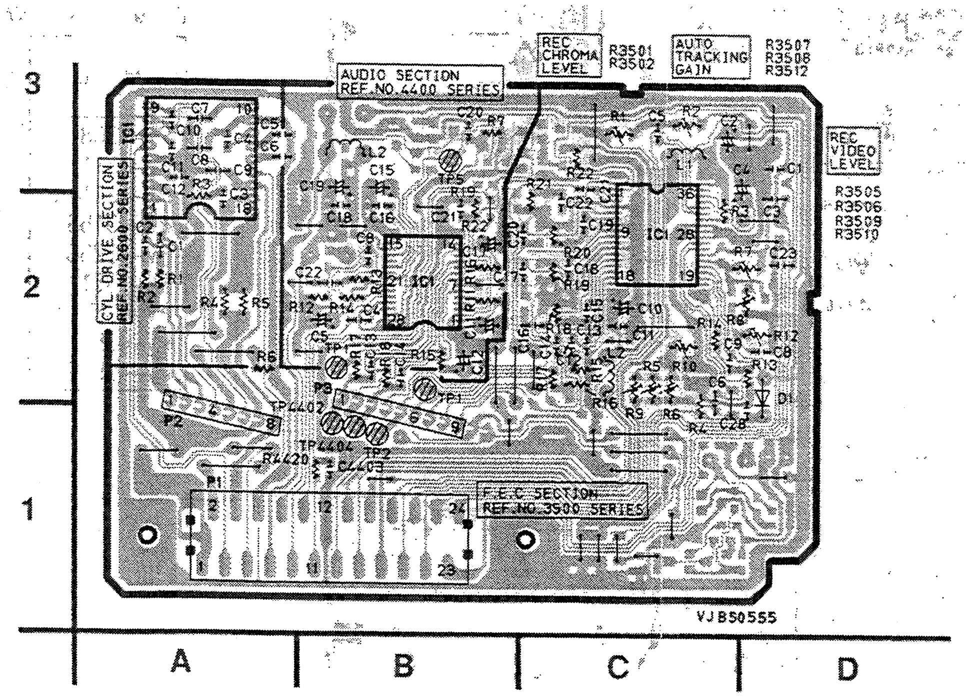
LEADLESS COMPONENT PARTS LOCATION GUIDE
HEAD AMP ASS'Y

R3501	B-2	R3517	B-1	C3512	B-1
R3502	B-2	R3518	A-1	C3513	B-1
R3503	B-2	R3519	A-2	C3514	B-1
R3504	B-2	R3520	A-2	C3515	B-1
R3505	B-2	R3521	A-2	C3516	B-1
R3506	B-2	R3522	A-2	C3517	B-2
R3507	B-2	C3501	B-2	C3518	A-2
R3508	C-1	C3503	C-2	C3519	A-2
R3509	C-2	C3505	B-2	C3520	B-2
R3510	B-2	C3506	B-2	C3521	B-2
R3512	B-2	C3508	B-1	C3522	A-2
R3513	B-1	C3509	B-1	C3523	A-2
R3514	B-2	C3511	B-1	C3528	C-1

COMPARISON CHART
OF MODELS & MARKS

MODEL	MARK
PV-4308	A
PV-4311	B
PV-4311-K	C
PV-4315S	D
PV-4325S	E
PV-4351	F
PV-4351-K	G
PV-4358	H
PV-4355S	I

Hi-Fi AUDIO/VIDEO HEAD AMP ASS'Y VEPS0555A1(F,G,H,I)


AUDIO SECTION REF.NO.4400 SERIES
REC CHROMA LEVEL R3501 R3502
AUTO TRACKING GAIN R3507 R3508 R3512
REC VIDEO LEVEL R3505 R3506 R3509 R3510
CYL DRIVE SECTION REF.NO.2600 SERIES
F.E.C SECTION REF.NO.3500 SERIES
IC1
TP1
TP2
TP5
TP4402
TP4404
P1
P2
P3
VJBS0555
1
2
3
A
B
C
D

CYLINDER DRIVE SECTION	
IC	
IC1	A-3

Hi-Fi AUDIO HEAD AMP SECTION	
IC	
IC1	B-2
TEST POINT	
TP1	B-2
TP2	B-1
TP4	B-1
TP5	B-3

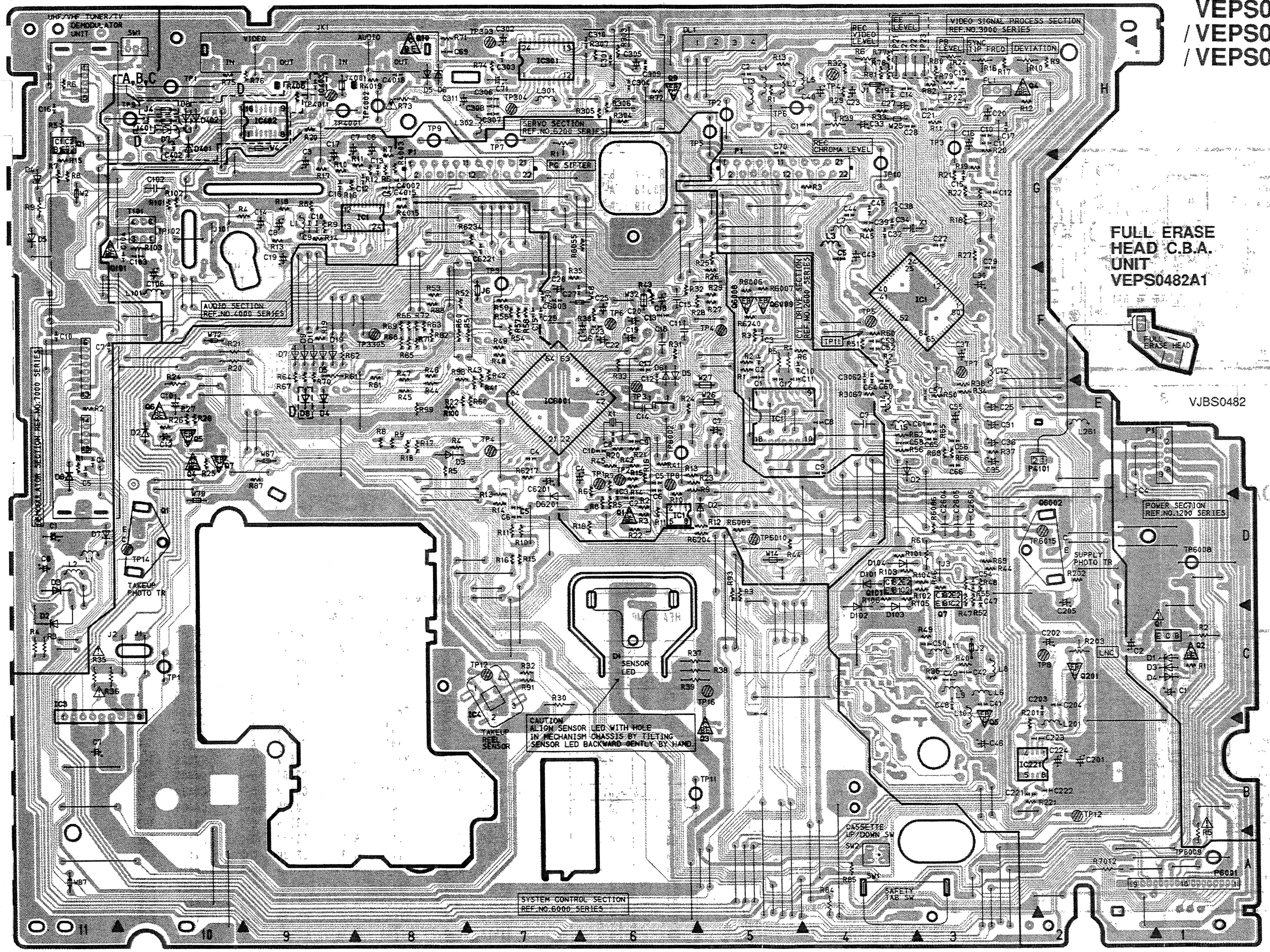
HEAD AMP SECTION	
IC	
IC1	C-2
CONNECTOR	
P1	A-1
P2	A-1
P3	B-1
TEST POINT	
TP1	B-1
TP2	B-1
ADJUSTMENT	
R1	C-3
R2	C-3
R5	C-2
R6	C-2
R7	C-2
R8	C-2
R9	C-2
R10	C-2
R12	D-2

LEADLESS COMPONENT PARTS LOCATION GUIDE
Hi-Fi AUDIO/VIDEO HEAD AMP ASS'Y

R2601	A-2	R3518	C-2	C2604	A-3	C3516	C-2
R2602	A-2	R3519	C-2	C2605	A-3	C3517	B-2
R2603	A-3	R3520	C-2	C2606	A-3	C3518	C-2
R2604	A-2	R3521	C-3	C2607	A-3	C3519	C-2
R2605	A-2	R3522	C-3	C2608	A-3	C3520	B-2
R2606	A-2	R4407	B-3	C2609	A-3	C3521	C-3
R3501	C-3	R4411	B-2	C2610	A-3	C3522	C-2
R3502	C-3	R4412	B-2	C2611	A-3	C3523	D-2
R3503	C-2	R4413	B-2	C2612	A-3	C3528	D-1
R3504	C-1	R4414	B-2	C3501	D-3	C4403	B-1
R3505	C-2	R4415	B-2	C3503	D-2	C4404	B-2
R3506	C-2	R4416	B-2	C3505	C-3	C4408	B-2
R3507	D-2	R4417	B-2	C3506	C-2	C4413	B-2
R3508	D-2	R4418	B-2	C3508	D-2	C4414	B-2
R3509	C-2	R4419	B-3	C3509	C-2	C4416	B-2
R3510	C-2	R4420	B-1	C3511	C-2	C4418	B-2
R3512	D-2	R4422	B-2	C3512	C-2	C4420	B-3
R3513	D-2	C2601	A-2	C3513	C-2	C4421	B-2
R3514	C-2	C2602	A-2	C3514	C-2	C4422	B-2
R3517	C-2	C2603	A-2	C3515	C-2		

MAIN (POWER SUPPLY/CYLINDER DRIVE/SIGNAL PROCESS/AUDIO/SYSTEM CONTROL/SERVO) C.B.A.

VEPS02197Y1 (A,B)
/ VEPS02197Q1 (C)
/ VEPS02197L1 (D)


UHF/VHF TUNER/TV DEMODULATOR UNIT
VIDEO IN OUT
AUDIO IN OUT
VIDEO SIGNAL PROCESS SECTION REF.NO.3000 SERIES
SERVO SECTION REF.NO.6200 SERIES
PG SIFTER
REC VIDEO LEVEL
EE LEVEL
PB LEVEL
SYNC TIP FREQ
DEVIATION
REC CHROMA LEVEL
AUDIO SECTION REF.NO.4000 SERIES
MODULATOR SECTION REF.NO.7000 SERIES
CYL DRIVE SECTION REF.NO.2000 SERIES
POWER SECTION REF.NO.1200 SERIES
SUPPLY PHOTO TR
TAKEUP PHOTO TR
TAKEUP REEL SENSOR
SENSOR LED
CAUTION
ALIGN SENSOR LED WITH HOLE
IN MECHANISM CHASSIS BY TILTING
SENSOR LED BACKWARD GENTLY BY HAND.
CASSETTE UP/DOWN SW
SAFETY TAB SW
SYSTEM CONTROL SECTION REF.NO.6000 SERIES
A B C D E F G H
1 2 3 4 5 6 7 8 9 10 11
VJBS02197

FULL ERASE HEAD C.B.A. UNIT VEPS0482A1

FULL ERASE HEAD

VJBS0482

POWER SUPPLY SECTION	
TRANSISTOR	
Q1	C-1
Q2	C-1
CONNECTOR	
P1	E-1

CYLINDER DRIVE SECTION	
IC	
IC1	E-5

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-4308	A
PV-4311	B
PV-4311-K	C
PV-4315S	D
PV-4325S	E
PV-4351	F
PV-4351-K	G
PV-4358	H
PV-4355S	I

NOTE:
MARK "$\overset{W}{-\boxminus-}$" ON THE MAIN C.B.A. INDICATES THAT 0 OHM RESISTOR OR WIRE IS USED.
WHEN REPLACING , A WIRE SHOULD BE SUBSTITUTED FOR THE 0 OHM RESISTOR.
(J3004 , J4001 , W3004 , W3025 , W6067 , W6072 , W6079 , W6087 , W6214 , W6226 , W6227 , W6232 , W6248 , W7002)

ORTANT SAFETY NOTICE:
M NENTS IDENTIFIED BY THE SIGN ⚠ HAVE
EC L CHARACTERISTICS IMPORTANT FOR SAFETY.
EN EPLACING ANY OF THESE COMPONENTS,
E ONLY THE SPECIFIED PARTS.

TEST POINT INFORMATION
⦶ : TEST POINT WITH A JUMPER WIRE ACROSS A HOLE IN P.C.B.
▭→ : TEST POINT WITH A COMPONENT LEAD ON THE FOIL SIDE.
⊘ : TEST POINT WITH NO TEST PIN.
● : TEST POINT WITH A TEST PIN.

VIDEO SIGNAL PROCESS SECTION	
TRANSISTOR	
Q4	H-3
Q5	B-3
Q7	C-3
Q9	H-6
Q10	H-8
Q101	D-4
Q201	C-2
IC	
IC1	F-3
IC221	B-3
IC301	H-7
IC402	
CONNECTOR	
P1	H-5
TEST POINT	
TP1	H-10
TP2	H-5
TP3	H-3
TP5	F-4
TP6	H-5
TP7	F-3
TP8	C-2
TP9	H-10
TP10	G-4
TP11	F-4
TP12	B-2
TP21	H-4
TP22	H-3
TP23	H-3
TP303	H-7
TP304	H-7
TP305	F-8
ADJUSTMENT	
R6	H-4
R10	H-3
R16	H-3
R24	H-3
R39	H-3
R203	C-2

AUDIO SECTION	
TRANSISTOR	
Q101	G-11
IC	
IC1	G-8
CONNECTOR	
P101	E-2
TEST POINT	
TP1	H-9
TP2	H-8
TP11	H-9
TP102	G-10

SYSTEM CONTROL SECTION	
TRANSISTOR	
Q1	D-10
Q2	D-2
Q3	B-5
Q4	E-10
Q5	E-10
Q6	E-10
Q7	E-10
Q8	F-5
Q9	F-5
IC	
IC1	E-7
IC3	C-11
IC4	C-7
CONNECTOR	
P1	A-1
TEST POINT	
TP1	C-10
TP2	E-6
TP3	F-7
TP4	E-7
TP8	D-1
TP9	A-1
TP10	D-5
TP11	B-5
TP12	C-7
TP14	D-10
TP15	D-2
TP16	C-5

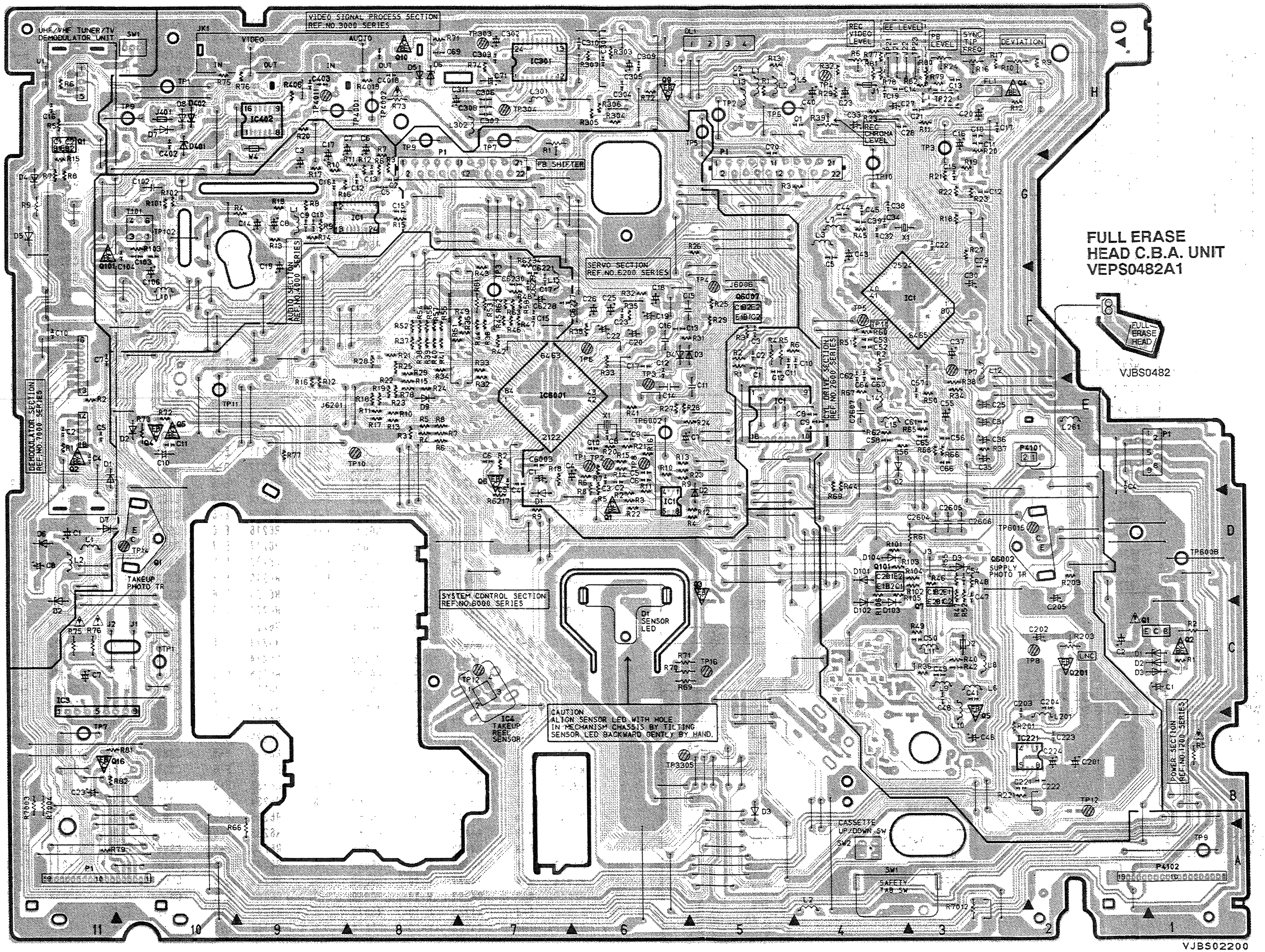
SERVO SECTION	
TRANSISTOR	
Q1	D-6
IC	
IC1	D-6
CONNECTOR	
P1	H-8
TEST POINT	
TP1	E-6
TP2	E-6
TP3	E-6
TP4	F-5
TP5	H-5
TP6	F-6
TP7	H-7
TP8	E-6
TP9	H-8
ADJUSTMENT	
R1	H-7

DEMODULATOR SECTION	
TRANSISTOR	
Q1	H-11

LEADLESS COMPONENT PARTS LOCATION GUIDE
MAIN C. B. A.

Q1202	C-1	R3052	C-3	R4102	G-10	R6081	F-8	R7006	H-11	C3203	C-2
Q3004	H-2	R3055	D-3	R4103	G-10	R6082	F-8	R7007	G-11	C3204	C-2
Q3005	B-3	R3056	E-4	R6003	D-5	R6085	A-4	R7008	G-11	C3221	B-3
Q3007	C-3	R3060	F-4	R6004	E-8	R6086	E-3	R7015	G-11	C3222	B-2
Q3009	F-5	R3062	E-4	R6005	E-8	R6087	E-9	C1204	E-2	C3223	B-2
Q3010	H-8	R3065	F-3	R6006	F-5	R6088	F-8	C2601	F-5	C3301	H-6
Q3101	D-4	R3066	F-3	R6007	F-5	R6089	D-5	C2602	F-5	C3303	H-7
Q3201	C-2	R3067	E-4	R6008	E-8	R6091	C-7	C2603	F-5	C3304	H-6
Q4101	G-10	R3068	F-3	R6009	E-9	R6093	D-5	C2608	E-4	C3306	H-7
Q6003	B-5	R3069	D-3	R6010	D-7	R6098	F-8	C2609	E-4	C3307	H-7
Q6004	E-10	R3071	H-8	R6011	D-7	R6099	E-8	C2610	F-4	C3308	H-7
Q6005	E-10	R3072	H-6	R6013	E-7	R6100	E-8	C2611	F-4	C3309	H-6
Q6006	E-10	R3074	H-7	R6014	D-7	R6202	D-6	C2612	F-5	C3310	H-6
Q6007	E-10	R3075	H-10	R6015	D-7	R6203	D-6	C3001	H-5	C3402	H-10
Q6008	F-5	R3076	H-9	R6016	D-7	R6204	D-5	C3002	H-5	C3403	H-9
Q6009	F-5	R3077	H-4	R6017	E-8	R6205	D-6	C3005	G-4	C4002	G-8
Q6201	D-6	R3078	H-4	R6018	E-8	R6206	E-6	C3010	H-3	C4005	G-8
Q7001	H-11	R3079	H-3	R6019	F-9	R6207	E-6	C3011	H-3	C4009	G-9
R1201	C-1	R3080	H-3	R6022	E-8	R6208	D-6	C3012	G-3	C4010	G-9
R2601	F-5	R3081	H-4	R6025	E-10	R6209	E-5	C3013	H-3	C4012	G-8
R2602	F-5	R3082	H-3	R6026	E-10	R6210	D-6	C3014	H-4	C4013	G-8
R2603	F-5	R3101	D-4	R6027	E-10	R6211	D-6	C3015	G-3	C4015	G-8
R2606	F-5	R3102	D-3	R6028	E-10	R6212	D-5	C3017	H-3	C4016	G-9
R3001	H-5	R3103	D-4	R6032	C-7	R6213	E-6	C3019	H-4	C4018	H-8
R3002	F-4	R3104	D-3	R6041	E-7	R6214	E-6	C3021	H-3	C4103	G-10
R3003	G-4	R3105	D-3	R6042	F-7	R6215	E-6	C3022	G-3	C4104	G-10
R3009	H-2	R3106	D-4	R6043	F-7	R6216	E-6	C3028	H-4	C6003	F-7
R3011	H-3	R3201	C-3	R6044	E-8	R6217	E-7	C3029	G-3	C6004	E-7
R3012	H-3	R3202	D-2	R6045	E-8	R6218	D-6	C3032	G-4	C6005	D-7
R3013	H-5	R3221	B-2	R6046	F-8	R6220	E-6	C3034	G-4	C6006	D-7
R3017	H-3	R3303	H-6	R6047	F-8	R6221	E-6	C3038	G-4	C6015	F-7
R3018	G-3	R3304	H-6	R6048	F-7	R6222	D-6	C3039	G-4	C6202	D-6
R3019	G-3	R3305	H-6	R6049	F-7	R6223	E-5	C3041	C-3	C6203	E-6
R3020	H-3	R3306	H-6	R6050	F-8	R6224	E-6	C3042	C-3	C6205	E-6
R3021	G-3	R3307	H-6	R6051	F-7	R6225	G-5	C3044	G-4	C6206	E-6
R3022	G-3	R3406	H-9	R6052	F-8	R6226	F-5	C3045	G-4	C6208	E-6
R3023	G-3	R4003	G-8	R6053	F-8	R6227	F-5	C3047	D-3	C6209	E-6
R3027	G-3	R4004	G-9	R6054	F-7	R6228	F-5	C3048	C-3	C6210	E-6
R3029	H-4	R4006	G-8	R6055	G-7	R6229	F-5	C3049	C-3	C6212	F-6
R3032	H-4	R4007	H-8	R6056	F-7	R6231	F-6	C3050	C-3	C6213	F-6
R3033	H-4	R4008	G-9	R6057	F-7	R6232	F-6	C3052	F-4	C6217	F-6
R3034	F-3	R4009	G-9	R6058	F-7	R6233	F-6	C3053	F-4	C6221	G-7
R3036	C-3	R4010	G-9	R6059	F-7	R6234	G-7	C3054	D-3	C6223	F-6
R3037	F-3	R4011	G-8	R6060	E-7	R6235	F-7	C3056	E-3	C6227	F-7
R3038	F-3	R4012	G-8	R6063	F-8	R6238	F-6	C3057	E-3	C6229	F-7
R3040	C-3	R4013	G-9	R6064	F-9	R6240	F-5	C3058	E-4	C6230	F-7
R3044	D-3	R4014	G-9	R6065	F-8	R6241	E-6	C3060	F-4	C7004	E-11
R3045	G-4	R4015	G-8	R6066	F-8	R6242	E-6	C3061	E-3	C7005	E-11
R3046	D-3	R4016	G-9	R6067	E-9	R6243	F-6	C3062	F-4	C7007	F-11
R3047	C-3	R4017	G-9	R6068	F-8	R6244	D-5	C3064	F-4	C7010	F-11
R3048	D-3	R4018	G-9	R6069	F-8	R6245	E-6	C3065	E-3	C7016	H-11
R3049	C-3	R4019	H-8	R6070	F-9	R7001	E-11	C3066	E-3		
R3050	E-3	R4020	H-9	R6071	F-8	R7002	E-11	C3069	H-8		
R3051	F-4	R4101	G-10	R6072	F-8	R7005	H-11	C3070	H-5		

MAIN (POWER SUPPLY/CYLINDER DRIVE/SIGNAL PROCESS/AUDIO/SYSTEM CONTROL/SERVO) C.B.A. VEPS02200B1 (E)



FULL ERASE HEAD C.B.A. UNIT VEPS0482A1

CAUTION
ALIGN SENSOR LED WITH HOLE IN MECHANISM CHASSIS BY TILTING SENSOR LED BACKWARD GENTLY BY HAND.

UHF/VHF TUNER/TV DEMODULATOR UNIT
VIDEO SIGNAL PROCESS SECTION REF.NO.3000 SERIES
JK1
VIDEO
AUDIO
IN
OUT
PB SHIFTER
REC VIDEO LEVEL
EE LEVEL
PB LEVEL
SYNC TIP FREQ
DEVIATION
REC CHROMA LEVEL
AUDIO SECTION REF.NO.4000 SERIES
SERVO SECTION REF.NO.6200 SERIES
IC6001
CYL DRIVE SECTION REF.NO.2600 SERIES
DEMODULATOR SECTION REF.NO.7000 SERIES
TAKEUP PHOTO TR
SUPPLY PHOTO TR
SYSTEM CONTROL SECTION REF.NO.6000 SERIES
D1 SENSOR LED
IC4 TAKEUP REEL SENSOR
POWER SECTION REF.NO.1200 SERIES
CASSETTE UP/DOWN SW
SW1 SAFETY TAB SW
FULL ERASE HEAD
VJBS0482
VJBS02200
A
B
C
D
E
F
G
H
1
2
3
4
5
6
7
8
9
10
11

TEST POINT INFORMATION
⦶ : TEST POINT WITH A JUMPER WIRE
▭→ : TEST POINT WITH A COMPONENT L
⊘ : TEST POINT WITH NO TEST PIN.
● : TEST POINT WITH A TEST PIN.

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN ⚠
SPECIAL CHARACTERISTICS IMPORTANT FO
WHEN REPLACING ANY OF THESE COMPONE
USE ONLY THE SPECIFIED PARTS.

POWER SUP SECTION	
TRANSIST	
Q1 Q2	
CONNECTO	
P1	

CYLINDER D SECTION	
IC	
IC1	

COMPARISON C
OF MODELS &

MODEL
PV-4308 PV-4311 PV-4311-K PV-4315S PV-4325S PV-4351 PV-4351-K PV-4358 PV-4355S

TEST POINT INFORMATION

⦶ : TEST POINT WITH A JUMPER WIRE ACROSS A HOLE IN P.C.B.
▭→ : TEST POINT WITH A COMPONENT LEAD ON THE FOIL SIDE.
⊘ : TEST POINT WITH NO TEST PIN.
● : TEST POINT WITH A TEST PIN.

NOTE:
MARK "$\overset{W}{-⊟-}$" ON THE MAIN C.B.A. INDICATES THAT 0 OHM RESISTOR OR WIRE IS USED.
WHEN REPLACING , A WIRE SHOULD BE SUBSTITUTED FOR THE 0 OHM RESISTOR.
(J3001 , J3002 , J3401 , W3004)

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

POWER SUPPLY SECTION	
TRANSISTOR	
Q1	C-2
Q2	C-1
CONNECTOR	
P1	E-1

CYLINDER DRIVE SECTION	
IC	
IC1	E-5

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-4308	A
PV-4311	B
PV-4311-K	C
PV-4315S	D
PV-4325S	E
PV-4351	F
PV-4351-K	G
PV-4358	H
PV-4355S	I

VIDEO SIGNAL PROCESS SECTION	
TRANSISTOR	
Q4	H-3
Q5	B-3
Q7	D-3
Q9	H-6
Q10	H-8
Q101	D-4
Q201	C-2
IC	
IC1	F-4
IC221	B-3
IC301	H-7
IC402	H-9
CONNECTOR	
P1	H-5
TEST POINT	
TP1	H-10
TP2	H-5
TP3	H-3
TP5	F-4
TP6	H-5
TP7	F-3
TP8	C-2
TP9	H-10
TP10	G-4
TP11	F-4
TP12	B-2
TP21	H-4
TP22	H-3
TP23	H-3
TP303	H-7
TP304	H-7
TP305	B-6
ADJUSTMENT	
R6	H-4
R10	H-3
R24	H-3
R39	H-4
R203	C-2

AUDIO SECTION	
TRANSISTOR	
Q101	G-11
IC	
IC1	G-8
CONNECTOR	
P101	E-2
P102	A-1
TEST POINT	
TP1	H-8
TP2	H-8
TP11	H-9
TP102	G-10

SYSTEM CONTROL SECTION	
TRANSISTOR	
Q1	D-10
Q2	D-3
Q3	D-5
Q4	E-10
Q5	E-10
Q6	E-7
Q7	F-5
Q16	B-11
IC	
IC1	E-7
IC3	C-11
IC4	B-7
CONNECTOR	
P1	A-11
TEST POINT	
TP1	C-10
TP2	E-6
TP3	E-7
TP7	B-11
TP8	D-1
TP9	A-1
TP10	E-8
TP11	E-9
TP12	C-7
TP14	D-10
TP15	D-2
TP16	C-5

SERVO SECTION	
TRANSISTOR	
Q1	D-6
IC	
IC1	D-6
CONNECTOR	
P1	H-8
TEST POINT	
TP1	E-6
TP2	E-6
TP3	F-6
TP4	G-5
TP5	H-5
TP6	F-6
TP7	H-7
TP8	E-6
TP9	H-8
ADJUSTMENT	
R1	H-7

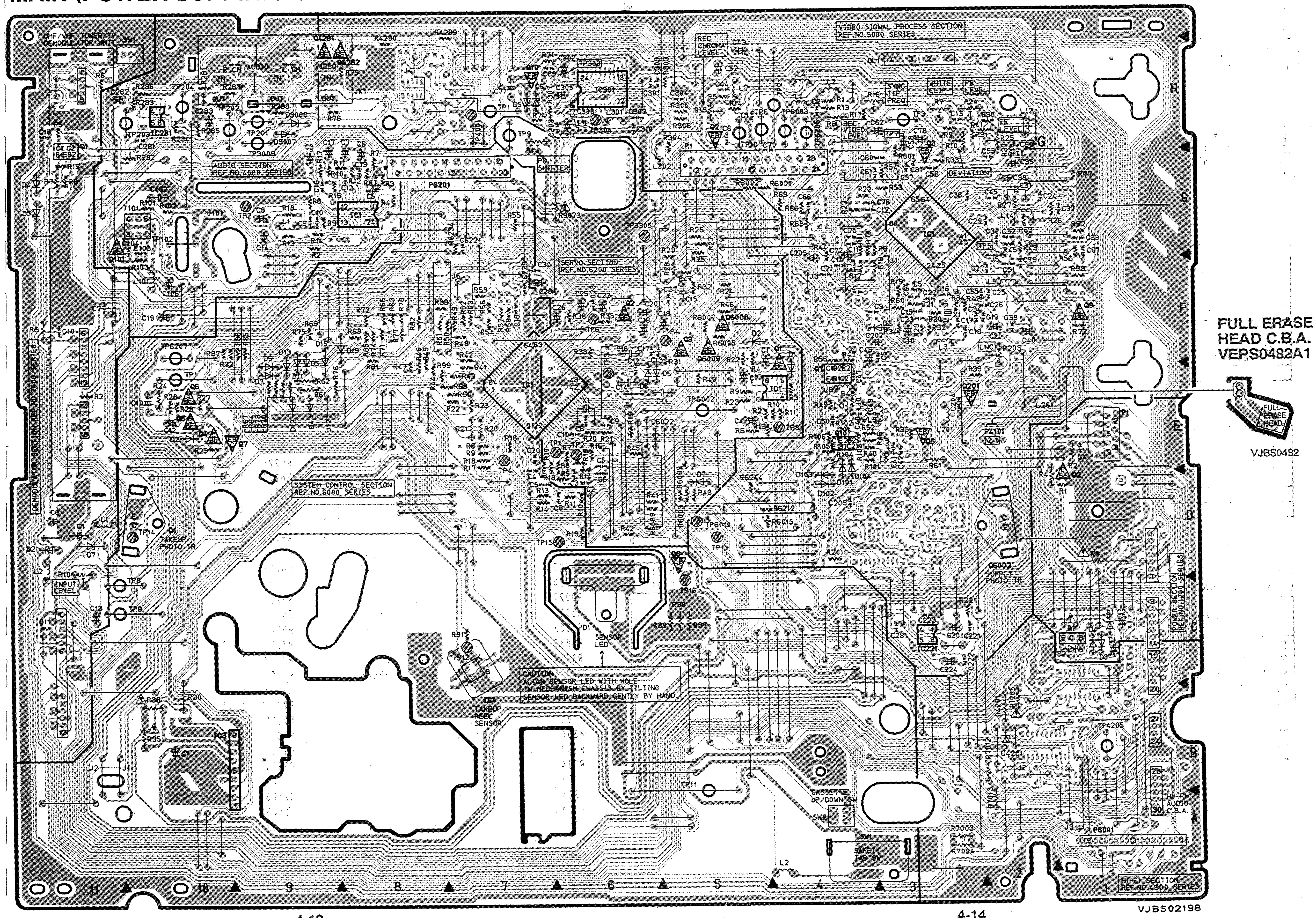
DEMODULATOR SECTION	
TRANSISTOR	
Q1	H-11
Q2	E-11

LEADLESS COMPONENT PARTS LOCATION GUIDE
MAIN C. B. A.

Q1202	C-1
Q3004	H-3
Q3005	B-3
Q3007	D-3
Q3009	H-6
Q3010	H-8
Q3101	D-4
Q3201	C-2
Q4101	G-11
Q6003	D-5
Q6004	E-10
Q6005	E-10
Q6006	E-7
Q6007	F-5
Q6016	B-11
Q6201	D-6
Q7001	H-11
Q7002	E-11
R1201	C-1
R2601	F-5
R2602	F-5
R2603	F-5
R2606	F-4
R3001	H-5
R3002	F-4
R3003	G-5
R3009	H-2
R3011	H-3
R3012	H-3
R3013	H-5
R3018	G-3
R3019	G-3
R3020	H-3
R3021	G-3
R3022	G-3
R3023	G-3
R3027	G-3
R3029	H-4
R3032	H-4
R3033	H-4
R3034	E-3
R3036	C-3
R3037	E-3
R3038	E-3
R3040	C-3
R3044	E-4
R3045	G-4
R3046	D-3
R3047	C-3
R3048	D-3
R3049	C-3
R3050	E-3
R3051	F-4
R3052	C-3
R3055	D-3
R3056	E-4
R3060	F-4
R3062	E-4
R3065	E-3
R3066	E-3
R3067	E-4
R3068	E-3
R3069	D-4
R3071	H-8
R3072	H-6
R3074	H-7
R3075	H-10
R3076	H-10
R3077	H-4
R3078	H-4
R3079	H-3
R3080	H-3
R3081	H-4
R3082	H-3
R3101	D-4
R3102	D-3
R3103	D-3
R3104	D-3
R3105	D-3
R3106	D-3
R3201	D-3
R3202	D-2
R3221	B-2
R3303	H-6
R3304	H-6
R3305	H-6
R3306	H-6
R3007	H-6
R3406	H-9
R4003	H-8
R4004	G-10
R4006	G-8
R4007	H-8
R4008	G-9
R4009	G-9
R4010	G-9
R4011	H-9
R4012	H-8
R4013	G-9
R4014	G-9
R4015	G-8
R4016	G-9
R4017	G-9
R4018	G-9
R4019	H-8
R4020	H-9
R4101	G-10
R4102	G-10
R4103	G-10
R6002	E-7
R6003	E-8
R6004	E-8
R6005	E-8
R6006	E-8
R6007	E-8
R6008	E-8
R6009	E-7
R6010	E-8
R6011	E-8
R6012	E-8
R6013	E-9
R6015	F-8
R6016	E-9
R6017	E-8
R6018	E-8
R6019	E-8
R6021	F-8
R6022	F-8
R6023	E-8
R6024	E-8
R6025	F-8
R6028	F-8
R6029	F-8
R6032	E-7
R6033	F-7
R6034	F-8
R6035	F-7
R6036	F-7
R6037	F-8
R6038	F-8
R6039	F-8
R6040	F-8
R6041	F-8
R6042	F-7
R6043	F-7
R6044	F-7
R6045	F-7
R6046	F-7
R6047	F-7
R6048	F-7
R6049	F-7
R6051	F-7
R6052	F-8
R6053	F-7
R6054	F-8
R6055	F-8
R6056	F-8
R6057	F-8
R6058	F-7
R6062	F-7
R6063	F-7
R6072	E-10
R6077	E-9
R6078	E-8
R6079	A-10
R6081	B-10
R6082	B-10
R6202	D-6
R6203	D-6
R6204	D-5
R6205	D-6
R6206	E-6
R6207	E-6
R6208	E-6
R6209	E-6
R6210	E-6
R6211	E-6
R6212	D-5
R6213	E-6
R6214	E-6
R6215	E-6
R6216	E-6
R6217	D-7
R6218	E-7
R6220	E-6
R6221	E-6
R6222	D-6
R6223	E-5
R6224	E-5
R6225	F-5
R6226	G-5
R6227	E-6
R6228	E-5
R6229	F-5
R6231	F-5
R6232	F-6
R6233	F-6
R6234	G-7
R6235	F-6
R6238	E-6
R6241	E-11
R7001	E-11
R7002	E-11
R7005	H-11
R7006	H-11
R7007	G-11
R7008	G-11
R7015	H-11
C1204	E-2
C2601	F-5
C2602	F-5
C2603	F-5
C2608	E-4
C2609	E-4
C2610	F-4
C2611	F-5
C2612	F-5
C3001	H-4
C3002	H-5
C3005	G-4
C3010	H-3
C3011	H-3
C3012	G-3
C3013	H-3
C3014	H-4
C3015	G-3
C3017	H-3
C3019	H-4
C3021	H-3
C3022	G-3
C3028	H-4
C3029	G-3
C3032	G-4
C3034	G-4
C3038	G-4
C3039	G-4
C3041	C-3
C3042	C-3
C3044	G-4
C3045	G-4
C3047	D-3
C3048	C-3
C3049	C-3
C3050	C-3
C3052	F-4
C3053	F-4
C3054	D-3
C3056	E-3
C3057	E-3
C3058	E-4
C3060	E-3
C3061	E-3
C3062	F-4
C3064	E-4
C3065	E-3
C3066	E-3
C3069	H-8
C3070	H-5
C3203	C-3
C3204	C-2
C3221	B-3
C3222	B-2
C3223	B-2
C3301	H-6
C3303	H-7
C3304	H-6
C3306	H-7
C3307	H-7
C3308	H-7
C3309	H-6
C3310	H-6
C3402	H-10
C3403	H-9
C4002	G-8
C4005	G-8
C4009	G-9
C4010	G-9
C4012	G-8
C4013	G-8
C4015	G-8
C4016	G-9
C4018	H-8
C4103	G-10
C4104	G-10
C6003	E-7
C6004	E-7
C6005	E-7
C6006	E-7
C6011	C-11
C6015	F-7
C6017	F-7
C6202	E-6
C6203	E-6
C6205	E-6
C6206	E-6
C6208	E-6
C6209	E-6
C6210	E-6
C6212	F-6
C6213	F-5
C6217	F-6
C6221	G-7
C6223	F-6
C6227	F-7
C6229	F-7
C6230	F-7
C7002	E-11
C7004	E-11
C7005	E-11
C7007	F-11
C7010	F-11
C7016	H-11

MAIN (POWER SUPPLY/SIGNAL PROCESS/AUDIO/Hi-Fi AUDIO/SYSTEM CONTROL/SERVO/TIMER) C.B.A.

VEPS02198A1(F) / VEPS


UHF/VHF TUNER/TV DEMODULATOR UNIT
VIDEO SIGNAL PROCESS SECTION REF.NO.3000 SERIES
AUDIO SECTION REF.NO.4000 SERIES
SERVO SECTION REF.NO.6200 SERIES
SYSTEM CONTROL SECTION REF.NO.6000 SERIES
DEMODULATOR SECTION REF.NO.7000 SERIES
POWER SECTION REF.NO.1200 SERIES
Hi-Fi SECTION REF.NO.4300 SERIES
Hi-Fi AUDIO C.B.A.
TAKEUP PHOTO TR
SUPPLY PHOTO TR
TAKEUP REEL SENSOR
SENSOR LED
CASSETTE UP/DOWN SW
SAFETY TAB SW
CAUTION
ALIGN SENSOR LED WITH HOLE IN MECHANISM CHASSIS BY TILTING SENSOR LED BACKWARD GENTLY BY HAND.
FULL ERASE HEAD
VJBS0482
VJBS02198

FULL ERASE HEAD C.B.A. UNIT VEPS0482A1

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-4308	A
PV-4311	B
PV-4311-K	C
PV-4315S	D
PV-4325S	E
PV-4351	F
PV-4351-K	G
PV-4358	H
PV-4355S	I

TEST POINT INFORMATION
- ⦶ : TEST POINT WITH A
- ▭→ : TEST POINT WITH A
- ▨ : TEST POINT WITH NC
- ● : TEST POINT WITH A

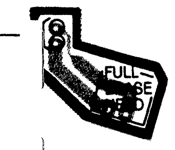
IMPORTANT SAFETY NOTI
COMPONENTS IDENTIFIE
SPECIAL CHARACTERIST
WHEN REPLACING ANY O
USE ONLY THE SPECIFIE

E PS02198A1(F) / VEPS02198H1(G) / VEPS02198E1(H)

COMPARISON CHART
OF MODELS & MARKS

MODEL	MARK
PV-4308	A
PV-4311	B
PV-4311-K	C
PV-4315S	D
PV-4325S	E
PV-4351	F
PV-4351-K	G
PV-4358	H
PV-4355S	I

FULL ERASE
EAD C.B.A. UNIT
EPS0482A1



VJBS0482

POWER SUPPLY SECTION	
TRANSISTOR	
Q1	C-1
Q2	D-1
CONNECTOR	
P1	E-1

AUDIO SECTION	
TRANSISTOR	
Q101	G-11
Q281	H-9
Q282	H-8
IC	
IC1	G-8
IC281	H-10
CONNECTOR	
P101	E-2
TEST POINT	
TP1	H-7
TP2	G-9
TP102	H-10
TP201	H-9
TP202	H-10
TP203	H-10
TP204	H-10
TP205	B-1

TEST POINT INFORMATION

⦶ : TEST POINT WITH A JUMPER WIRE ACROSS A HOLE IN P.C.B.
▭→ : TEST POINT WITH A COMPONENT LEAD ON THE FOIL SIDE.
⊘ : TEST POINT WITH NO TEST PIN.
● : TEST POINT WITH A TEST PIN.

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

VIDEO SIGNAL PROCESS SECTION	
TRANSISTOR	
Q2	H-5
Q3	H-3
Q5	E-3
Q7	E-4
Q9	F-1
Q10	H-7
Q101	E-4
Q201	E-3
IC	
IC1	G-3
IC221	C-3
IC301	H-6
CONNECTOR	
P1	H-5
TEST POINT	
TP1	H-7
TP2	H-4
TP3	H-3
TP5	G-2
TP6	H-5
TP7	H-3
TP9	H-9
TP10	H-5
TP11	D-5
TP303	H-6
TP304	H-6
TP305	G-6
ADJUSTMENT	
R6	H-4
R7	H-3
R10	H-3
R15	H-5
R16	H-3
R24	H-3
R25	H-2
R203	F-2

DEMODULATOR SECTION	
TRANSISTOR	
Q1	H-11
ADJUSTMENT	
R10	D-11

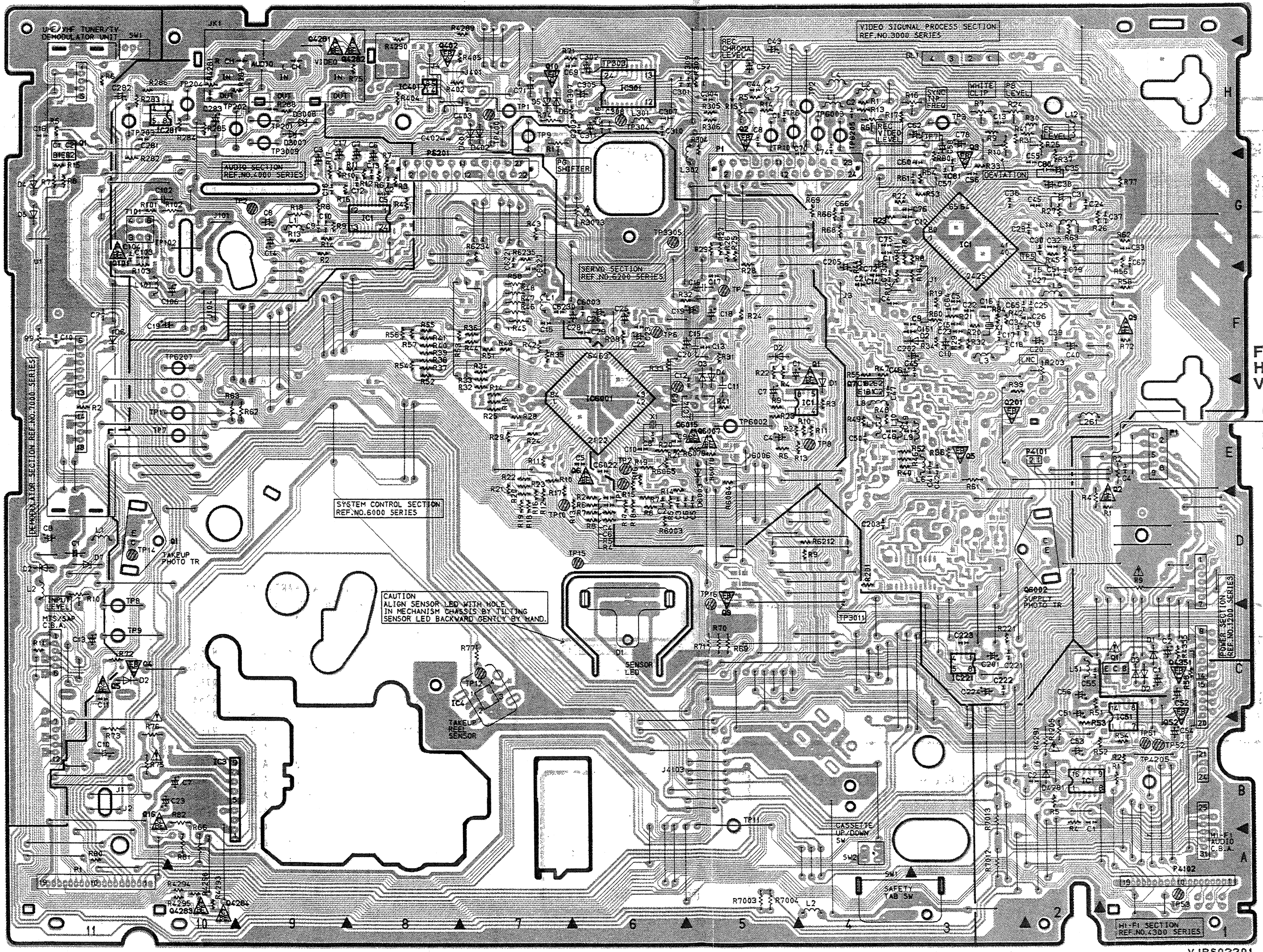
SYSTEM CONTROL SECTION	
TRANSISTOR	
Q1	D-10
Q2	D-2
Q3	D-5
Q4	E-10
Q5	E-10
Q6	E-10
Q7	E-9
Q8	F-5
Q9	F-5
IC	
IC1	E-7
IC3	B-10
IC4	B-7
CONNECTOR	
P1	A-1
TEST POINT	
TP1	E-10
TP2	E-5
TP3	H-4
TP4	E-7
TP8	D-10
TP9	C-10
TP10	D-5
TP11	B-5
TP12	C-7
TP14	D-10
TP15	D-6
TP16	C-5

SERVO SECTION	
TRANSISTOR	
Q1	F-4
Q2	F-6
Q3	F-5
IC	
IC1	E-4
CONNECTOR	
P1	G-8
TEST POINT	
TP1	E-6
TP2	E-6
TP3	F-6
TP4	F-5
TP5	H-4
TP6	F-6
TP7	F-10
TP8	E-5
TP9	H-7
ADJUSTMENT	
R1	H-7

LEADLESS COMPONENT PARTS LOCATION GUIDE
MAIN C. B. A.

Q1202	D-1	R3048	E-4	R4285	H-10	R6072	F-8	R6247	F-5	C3067	G-1		
Q3002	H-5	R3049	E-4	R4286	H-10	R6073	E-9	R6248	D-5	C3069	H-6		
Q3003	H-3	R3052	E-4	R4287	H-10	R6074	F-8	R7002	E-11	C3070	H-4		
Q3005	E-3	R3053	G-3	R4288	H-9	R6075	F-9	R7005	H-11	C3073	F-4		
Q3007	E-4	R3054	G-3	R4289	H-8	R6076	E-9	R7006	H-11	C3075	G-4		
Q3009	F-1	R3055	F-4	R4290	H-8	R6077	F-8	R7007	G-11	C3076	G-3		
Q3010	H-7	R3056	F-1	R6001	G-4	R6078	F-8	R7008	G-11	C3079	F-2		
Q3101	E-4	R3058	F-1	R6002	G-5	R6081	F-8	R7011	C-11	C3080	H-2		
Q3201	E-3	R3060	F-3	R6003	D-5	R6082	F-8	R7015	G-11	C3081	G-3		
Q4101	G-11	R3062	G-1	R6006	F-5	R6085	F-9	C1204	E-1	C3203	D-4		
Q4281	H-9	R3063	G-2	R6007	F-5	R6086	F-9	C3001	H-5	C3204	E-3		
Q4282	H-8	R3066	G-4	R6008	E-7	R6087	E-10	C3002	H-4	C3221	C-3		
Q6003	D-5	R3068	G-4	R6009	E-7	R6088	F-8	C3004	F-4	C3222	C-3		
Q6004	E-10	R3069	G-4	R6010	D-6	R6089	D-6	C3005	F-3	C3223	C-3		
Q6005	E-10	R3071	H-6	R6011	D-6	R6091	C-7	C3008	H-5	C3281	C-3		
Q6006	E-10	R3072	F-1	R6013	D-7	R6093	D-5	C3009	F-3	C3301	H-6		
Q6007	E-9	R3074	H-7	R6014	D-7	R6098	E-7	C3011	G-4	C3303	H-6		
Q6008	F-5	R3075	H-8	R6015	D-4	R6099	F-8	C3012	G-3	C3304	H-5		
Q6009	F-5	R3076	H-9	R6016	E-7	R6202	E-5	C3013	H-3	C3306	H-6		
Q6201	F-4	R3077	G-1	R6017	E-7	R6203	E-4	C3014	G-4	C3307	H-6		
Q6202	F-6	R3078	G-4	R6018	E-7	R6204	E-5	C3015	F-3	C3308	H-6		
Q6203	F-5	R3080	G-3	R6019	D-6	R6205	E-6	C3016	F-3	C3309	H-6		
Q7001	H-11	R3084	F-3	R6022	E-7	R6206	E-5	C3017	F-3	C3310	H-6		
R1201	D-1	R3101	E-4	R6023	E-7	R6207	E-6	C3018	F-3	C4002	G-8		
R3001	H-4	R3102	F-4	R6025	E-10	R6208	E-6	C3019	F-2	C4005	G-8		
R3005	H-5	R3103	F-4	R6026	E-10	R6209	E-5	C3021	F-4	C4009	G-9		
R3008	G-3	R3104	E-4	R6027	E-10	R6210	E-4	C3022	F-3	C4010	G-9		
R3009	H-3	R3105	E-4	R6028	E-10	R6211	E-4	C3023	F-3	C4012	G-8		
R3011	G-4	R3106	E-4	R6032	F-10	R6212	D-4	C3024	G-2	C4013	G-8		
R3012	F-4	R3201	D-4	R6041	F-7	R6213	E-5	C3025	F-2	C4016	G-9		
R3013	H-4	R3221	C-3	R6042	F-7	R6214	E-6	C3026	F-2	C4103	G-10		
R3014	H-5	R3303	H-5	R6043	E-7	R6215	E-6	C3027	F-3	C4104	G-10		
R3017	H-4	R3304	H-5	R6044	E-8	R6216	E-6	C3029	G-3	C4281	H-10		
R3018	F-3	R3305	H-5	R6045	F-8	R6217	E-7	C3030	G-2	C6004	E-7		
R3019	F-3	R3306	H-5	R6046	F-8	R6218	E-6	C3032	G-2	C6005	E-7		
R3020	F-3	R3307	H-6	R6047	F-8	R6219	E-6	C3033	G-1	C6006	D-6		
R3021	F-3	R4002	G-9	R6048	F-7	R6220	E-6	C3034	F-3	C6015	F-7		
R3022	G-4	R4003	G-8	R6049	F-7	R6221	E-6	C3036	G-3	C6020	E-7		
R3023	G-4	R4004	G-8	R6050	F-7	R6222	F-5	C3037	G-1	C6202	D-6		
R3026	G-1	R4006	G-8	R6051	F-8	R6223	E-5	C3039	F-2	C6203	D-6		
R3027	G-2	R4007	H-8	R6052	F-7	R6224	F-5	C3041	E-3	C6205	E-6		
R3029	F-3	R4008	G-9	R6053	F-7	R6225	G-5	C3042	E-3	C6206	E-6		
R3030	H-2	R4009	G-9	R6054	F-7	R6226	G-5	C3044	H-5	C6208	E-6		
R3031	H-3	R4010	G-9	R6055	G-7	R6227	G-5	C3045	G-2	C6209	E-6		
R3032	F-3	R4011	G-9	R6056	F-7	R6228	F-5	C3047	E-4	C6210	E-6		
R3033	G-3	R4012	G-8	R6057	F-7	R6229	G-5	C3048	E-4	C6212	F-6		
R3034	F-3	R4013	G-9	R6058	F-7	R6231	F-5	C3049	E-4	C6213	F-6		
R3036	E-3	R4014	G-9	R6059	F-7	R6232	F-5	C3050	E-4	C6217	F-6		
R3037	G-2	R4016	G-9	R6060	E-7	R6233	F-6	C3051	F-2	C6221	G-7		
R3039	E-3	R4017	G-9	R6063	F-8	R6234	G-7	C3054	F-3	C6223	F-6		
R3040	E-4	R4018	G-9	R6064	E-9	R6235	F-6	C3055	G-2	C6227	F-5		
R3041	H-3	R4101	G-10	R6065	F-8	R6238	F-6	C3056	G-3	C6229	F-7		
R3042	F-3	R4102	G-10	R6066	F-8	R6240	E-5	C3057	G-3	C6230	G-7		
R3043	G-2	R4103	G-10	R6067	E-9	R6241	D-6	C3060	G-4	C7007	F-11		
R3044	G-4	R4281	H-10	R6068	F-8	R6242	D-6	C3061	G-4	C7010	F-11		
R3045	G-2	R4282	H-10	R6069	F-9	R6244	D-5	C3064	F-3	C7016	H-11		
R3046	E-4	R4283	H-10	R6070	E-9	R6245	E-6	C3065	F-3				
R3047	F-4	R4284	H-10	R6071	F-8	R6246	F-5	C3066	G-4				

MAIN (POWER SUPPLY/SIGNAL PROCESS/AUDIO/Hi-Fi AUDIO/SYSTEM CONTROL/SERVO) C.B.A. VEPS02201C1 (I)


UHF/VHF TUNER/TV DEMODULATOR UNIT
AUDIO SECTION REF.NO.4000 SERIES
PG SHIFTER
SERVO SECTION REF.NO.6200 SERIES
VIDEO SIGNAL PROCESS SECTION REF.NO.3000 SERIES
REC CHROMA LEVEL
SYNC TIP FREQ
WHITE CLIP
PB LEVEL
REC VIDEO LEVEL
DEVIATION
FE LEVEL
DEMODULATOR SECTION REF.NO.7000 SERIES
SYSTEM CONTROL SECTION REF.NO.6000 SERIES
TAKEUP PHOTO TR
CAUTION
ALIGN SENSOR LED WITH HOLE IN MECHANISM CHASSIS BY TILTING SENSOR LED BACKWARD GENTLY BY HAND.
SENSOR LED
SUPPLY PHOTO TR
INPUT LEVEL
MTS/SAP C.B.A.
TAKEUP REEL SENSOR
CASSETTE UP/DOWN SW
SAFETY TAB SW
POWER SECTION REF.NO.1200 SERIES
HI-FI AUDIO C.B.A.
HI-FI SECTION REF.NO.4300 SERIES
H
G
F
E
D
C
B
A
11
10
9
8
7
6
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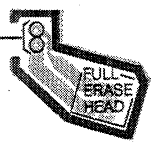
4
3
2
1
VJBS02201

POWER SUPPLY SECTION	
TRANSISTOR	
Q1	C-1
Q2	E-1
CONNECTOR	
P1	E-1

FULL ERASE HEAD C.B.A. UNIT VEPS0482A1


FULL ERASE HEAD

VJBS0482

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-4308	A
PV-4311	B
PV-4311-K	C
PV-4315S	D
PV-4325S	E
PV-4351	F
PV-4351-K	G
PV-4358	H
PV-4355S	I

POWER SUPPLY SECTION

TRANSISTOR	
Q1	C-1
Q2	E-1
CONNECTOR	
P1	E-1

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-4308	A
PV-4311	B
PV-4311-K	C
PV-4315S	D
PV-4325S	E
PV-4351	F
PV-4351-K	G
PV-4358	H
PV-4355S	I

AUDIO SECTION

TRANSISTOR	
Q101	G-11
Q281	H-9
Q282	H-8
Q283	A-10
Q284	A-10
IC	
IC1	G-8
IC281	H-10
CONNECTOR	
P101	E-2
P102	A-1
TEST POINT	
TP1	H-7
TP2	G-9
TP102	G-10
TP201	H-9
TP202	H-9
TP203	H-11
TP204	H-10
TP205	B-1

Hi-Fi AUDIO SECTION

TRANSISTOR	
Q351	C-1
Q352	B-1
IC	
IC301	B-2
IC351	C-1
TEST POINT	
TP351	B-1
TP352	B-1
TP353	A-1

VIDEO SIGNAL PROCESS SECTION

TRANSISTOR	
Q2	H-5
Q3	H-3
Q5	E-3
Q7	E-4
Q9	F-1
Q10	H-7
Q101	E-4
Q201	E-3
Q402	H-8
IC	
IC1	G-3
IC221	C-3
IC301	H-6
IC401	H-8
CONNECTOR	
P1	H-5
TEST POINT	
TP1	H-7
TP2	H-4
TP3	H-4
TP5	G-2
TP6	H-5
TP7	H-3
TP9	H-9
TP10	H-5
TP11	C-4
TP303	H-6
TP304	H-6
TP305	G-6
ADJUSTMENT	
R6	H-4
R7	H-3
R10	H-3
R15	H-5
R16	H-3
R24	H-3
R25	H-2
R203	F-2

SYSTEM CONTROL SECTION

TRANSISTOR	
Q1	D-10
Q2	D-2
Q3	C-2
Q4	C-11
Q5	C-11
Q6	E-6
Q7	E-5
Q15	E-5
Q16	B-11
IC	
IC1	E-6
IC3	B-10
IC4	C-7
CONNECTOR	
P1	A-11
TEST POINT	
TP1	E-11
TP2	E-5
TP3	H-4
TP7	E-11
TP8	D-11
TP9	C-11
TP10	D-7
TP11	B-5
TP12	C-7
TP14	D-11
TP15	D-6
TP16	D-5

SERVO SECTION

TRANSISTOR	
Q1	F-4
IC	
IC1	E-4
CONNECTOR	
P1	H-8
TEST POINT	
TP1	E-6
TP2	E-6
TP3	E-6
TP4	F-5
TP5	H-4
TP6	F-6
TP7	F-10
TP8	E-10
TP9	H-7
ADJUSTMENT	
R1	H-7

DEMODULATOR SECTION

TRANSISTOR	
Q1	H-11
ADJUSTMENT	
R10	D-11

T T POINT INFORMATION

D : TEST POINT WITH A JUMPER WIRE ACROSS A HOLE IN P.C.B.
▭→ : TEST POINT WITH A COMPONENT LEAD ON THE FOIL SIDE.
⊘ : TEST POINT WITH NO TEST PIN.
◗ : TEST POINT WITH A TEST PIN.

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

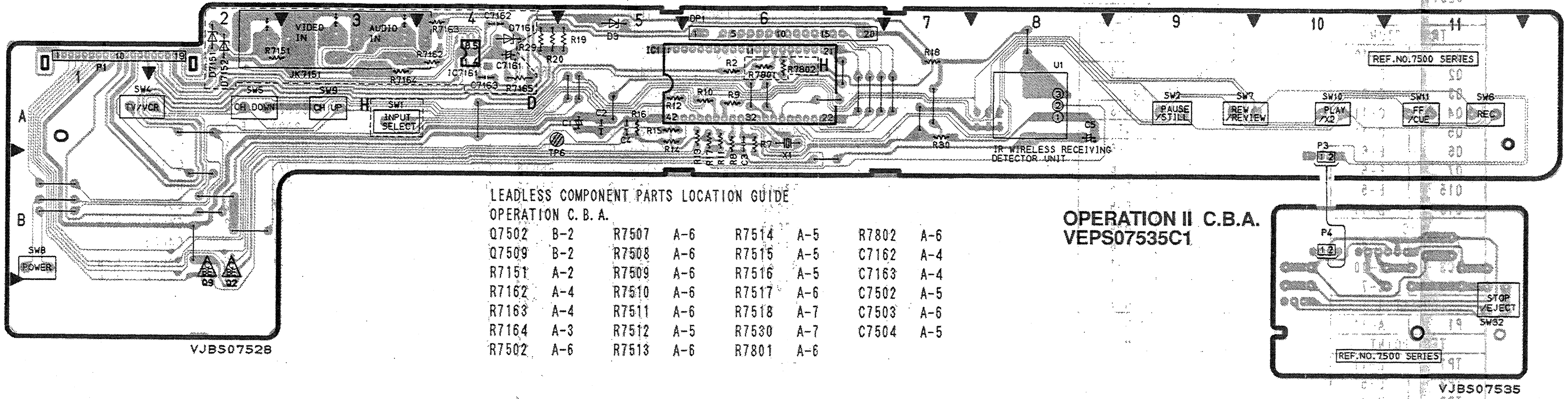
LEADLESS COMPONENT PARTS LOCATION GUIDE

MAIN C. B. A.

Q1202	E-1	R3034	F-3	R4003	G-8	R6012	E-7	R6208	D-6	C3017	F-3	C3303	H-6
Q3002	H-5	R3036	E-3	R4004	G-8	R6013	D-7	R6209	E-5	C3018	F-3	C3304	H-5
Q3003	H-3	R3037	H-2	R4006	G-8	R6014	E-7	R6210	E-4	C3019	F-2	C3306	H-6
Q3005	E-3	R3039	E-3	R4007	H-8	R6015	E-7	R6211	E-4	C3021	F-4	C3307	H-6
Q3007	E-4	R3040	E-4	R4008	G-9	R6016	E-7	R6212	D-4	C3022	F-3	C3308	H-6
Q3009	F-1	R3041	H-2	R4009	G-9	R6017	E-7	R6213	E-4	C3023	F-3	C3309	H-6
Q3010	H-7	R3042	F-3	R4010	G-9	R6018	E-7	R6214	E-6	C3024	G-2	C3310	H-6
Q3101	E-4	R3043	G-2	R4011	G-8	R6019	D-7	R6215	E-6	C3025	F-2	C3402	H-8
Q3201	E-3	R3044	G-4	R4012	G-8	R6020	E-7	R6216	E-6	C3026	F-2	C3403	H-7
Q3402	H-8	R3045	G-2	R4013	G-9	R6021	E-7	R6217	D-6	C3027	F-2	C4002	G-8
Q4101	G-11	R3046	E-4	R4014	G-9	R6022	E-7	R6218	D-6	C3029	G-3	C4005	G-8
Q4281	H-9	R3047	F-4	R4016	G-8	R6023	E-7	R6219	E-6	C3030	G-2	C4009	G-9
Q4282	H-8	R3048	E-4	R4017	G-9	R6024	E-7	R6220	E-6	C3032	G-2	C4010	G-9
Q4283	A-10	R3049	E-4	R4101	G-11	R6025	E-7	R6221	G-7	C3033	G-1	C4012	G-8
Q4284	A-10	R3052	E-4	R4103	G-11	R6028	E-7	R6222	F-5	C3034	F-3	C4013	G-8
Q4351	C-1	R3053	G-3	R4281	H-10	R6029	E-7	R6223	E-5	C3036	G-3	C4016	G-9
Q4352	C-1	R3054	G-3	R4282	H-11	R6032	E-7	R6224	F-5	C3037	G-1	C4103	G-11
Q6003	C-5	R3055	F-4	R4283	H-11	R6033	F-7	R6225	G-5	C3039	F-2	C4104	G-11
Q6004	C-11	R3056	F-1	R4284	H-10	R6034	F-7	R6226	G-5	C3041	E-3	C4281	H-10
Q6005	C-11	R3058	F-1	R4285	H-10	R6035	F-7	R6227	G-5	C3042	E-3	C4301	B-2
Q6006	E-6	R3060	F-3	R4286	H-11	R6036	F-7	R6228	F-5	C3044	H-5	C4302	B-2
Q6007	E-5	R3062	G-1	R4287	H-9	R6037	F-8	R6229	G-5	C3045	G-2	C4355	C-2
Q6015	E-5	R3063	G-2	R4288	H-9	R6038	F-8	R6231	F-5	C3047	E-4	C6003	F-6
Q6016	B-11	R3066	G-4	R4289	H-7	R6039	F-8	R6232	F-5	C3048	E-4	C6004	D-6
Q6201	F-4	R3068	G-4	R4290	H-8	R6040	F-8	R6233	F-6	C3049	E-4	C6005	E-6
Q7001	H-11	R3069	G-4	R4293	A-10	R6041	F-8	R6234	G-7	C3050	E-4	C6006	F-6
R1201	D-1	R3071	H-7	R4294	A-10	R6042	F-7	R6235	G-7	C3051	F-2	C6011	C-11
R3001	H-4	R3072	F-1	R4295	A-10	R6043	G-7	R6238	F-6	C3054	F-3	C6015	F-7
R3005	H-5	R3075	H-8	R4296	A-10	R6044	F-7	R6241	E-5	C3055	G-2	C6022	E-6
R3008	G-3	R3077	G-1	R4301	B-1	R6049	F-7	R7002	E-11	C3056	G-3	C6202	D-6
R3009	H-3	R3078	G-4	R4302	B-1	R6051	F-7	R7005	H-11	C3057	G-3	C6203	D-6
R3011	G-4	R3080	G-3	R4304	B-2	R6052	F-8	R7006	H-11	C3060	G-3	C6205	D-5
R3012	F-4	R3084	F-3	R4305	B-2	R6053	F-7	R7007	G-11	C3061	G-4	C6206	D-6
R3013	H-4	R3101	E-4	R4351	C-2	R6054	F-8	R7008	G-11	C3064	F-3	C6208	E-6
R3014	H-5	R3102	E-4	R4352	B-1	R6055	F-8	R7011	C-11	C3065	F-3	C6209	E-6
R3017	H-4	R3103	E-4	R4353	B-2	R6056	F-8	R7015	G-11	C3066	G-4	C6210	E-6
R3018	F-3	R3104	E-4	R4354	B-1	R6057	F-8	C1204	E-1	C3067	G-1	C6212	F-5
R3019	F-3	R3105	E-4	R4355	D-1	R6064	E-5	C3001	H-5	C3069	H-7	C6213	F-5
R3020	F-3	R3106	E-4	R4356	C-1	R6065	E-6	C3002	H-4	C3070	H-4	C6217	F-5
R3021	G-4	R3201	D-4	R6002	D-6	R6072	C-11	C3004	F-4	C3073	F-4	C6221	G-7
R3022	G-4	R3221	C-3	R6003	D-6	R6078	E-5	C3005	F-3	C3075	G-4	C6223	F-6
R3023	G-4	R3304	H-5	R6004	D-6	R6079	E-5	C3008	H-5	C3076	G-3	C6227	G-7
R3026	G-1	R3305	H-5	R6005	D-6	R6080	A-10	C3009	F-3	C3079	F-2	C6229	F-6
R3027	G-2	R3306	H-5	R6006	D-6	R6202	E-5	C3011	G-4	C3203	D-4	C6230	F-7
R3029	F-3	R3307	H-7	R6007	D-6	R6203	E-4	C3012	G-2	C3204	E-3	C7007	F-11
R3030	H-2	R3402	H-7	R6008	D-6	R6204	E-5	C3013	H-3	C3221	C-3	C7010	F-11
R3031	H-3	R3404	H-8	R6009	D-4	R6205	D-6	C3014	F-4	C3222	C-3	C7016	H-11
R3032	F-3	R3405	H-8	R6010	E-7	R6206	E-5	C3015	F-3	C3223	C-3		
R3033	G-3	R4002	F-8	R6011	E-7	R6207	D-6	C3016	F-3	C3301	H-6		

OPERATION I/II C.B.A.(A,D,H)

OPERATION I C.B.A. VEPS07528A1(A) / VEPS07528C1(D) / VEPS07528B1(H)



VIDEO IN
AUDIO IN
JK7151
R7151
R7162
R7163
R7164
R7165
C7161
C7162
C7163
IC7161
Q7161
R19
R20
D5
DP1
IC1
R2
R7801
R7802
R10
R9
R12
R15
R14
R16
R7
X1
C1
C2
C4
TP6
R18
R30
U1
IR WIRELESS RECEIVING DETECTOR UNIT
SW4 TV/VCR
SW5 CH DOWN
SW9 CH UP
SW1 INPUT SELECT
SW2 PAUSE/STILL
SW7 REW/REVIEW
SW10 PLAY/X2
SW11 FF/CUE
SW6 REC
SW8 POWER
Q9
Q2
P1
P3
P4
SW32 STOP/EJECT
REF.NO.7500 SERIES
A
B
1
2
3
4
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7
8
9
10
11
D
H

LEADLESS COMPONENT PARTS LOCATION GUIDE
OPERATION C. B. A.

Q7502	B-2	R7507	A-6	R7514	A-5	R7802	A-6
Q7509	B-2	R7508	A-6	R7515	A-5	C7162	A-4
R7151	A-2	R7509	A-6	R7516	A-5	C7163	A-4
R7162	A-4	R7510	A-6	R7517	A-6	C7502	A-5
R7163	A-4	R7511	A-6	R7518	A-7	C7503	A-6
R7164	A-3	R7512	A-5	R7530	A-7	C7504	A-5
R7502	A-6	R7513	A-6	R7801	A-6		

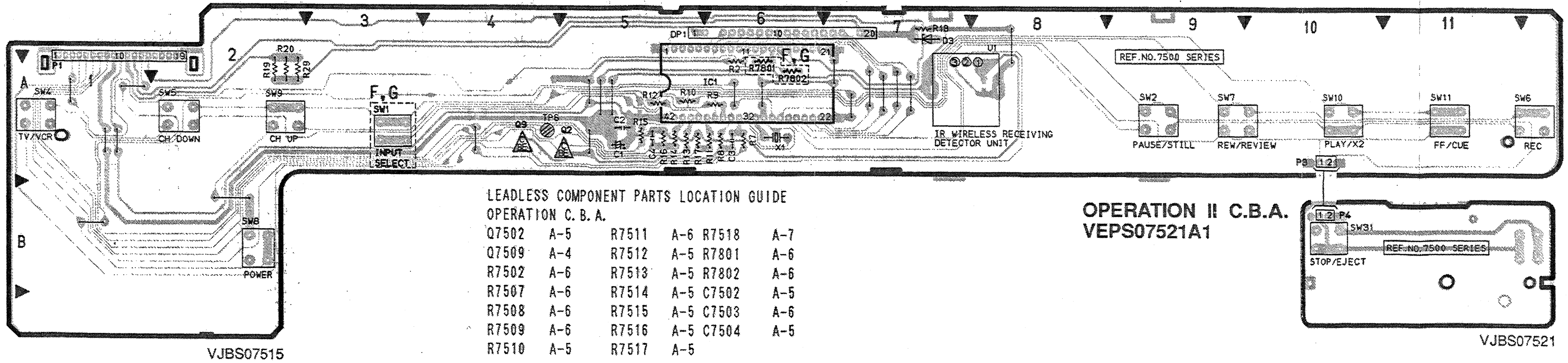
VJBS07528

OPERATION II C.B.A.
VEPS07535C1

VJBS07535

OPERATION I/II C.B.A.(B,C,F,G)

OPERATION I C.B.A. VEPS07515A1(B,C) / VEPS07515B1(F,G)



P1
R20
R19
R29
DP1
IC1
R2
R7801
R7802
F,G
R10
R9
R12
R15
C1
C2
Q9
Q2
TP6
X1
R18
D3
U1
IR WIRELESS RECEIVING DETECTOR UNIT
SW4 TV/VCR
SW5 CH DOWN
SW9 CH UP
SW1 INPUT SELECT
SW2 PAUSE/STILL
SW7 REW/REVIEW
SW10 PLAY/X2
SW11 FF/CUE
SW6 REC
SW8 POWER
P3
P4
SW31 STOP/EJECT
REF.NO.7500 SERIES
A
B
1
2
3
4
5
6
7
8
9
10
11

LEADLESS COMPONENT PARTS LOCATION GUIDE
OPERATION C. B. A.

Q7502	A-5	R7511	A-6	R7518	A-7
Q7509	A-4	R7512	A-5	R7801	A-6
R7502	A-6	R7513	A-5	R7802	A-6
R7507	A-6	R7514	A-5	C7502	A-5
R7508	A-6	R7515	A-5	C7503	A-6
R7509	A-6	R7516	A-5	C7504	A-5
R7510	A-5	R7517	A-5		

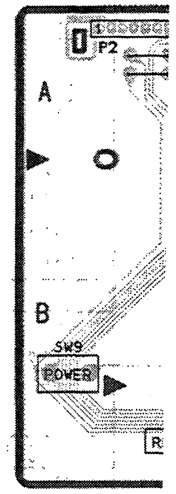
VJBS07515

OPERATION II C.B.A.
VEPS07521A1

VJBS07521

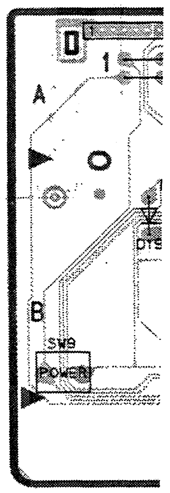
TIMER/

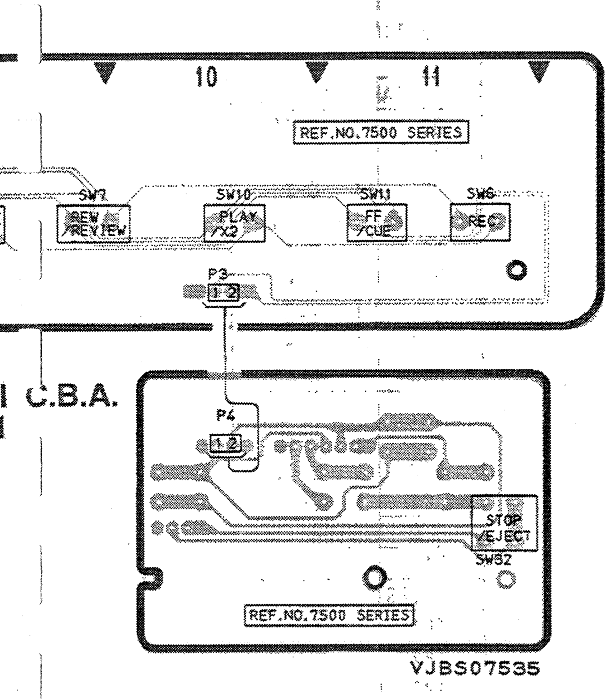
TIMER/OP



TIMER

TIMER/OP

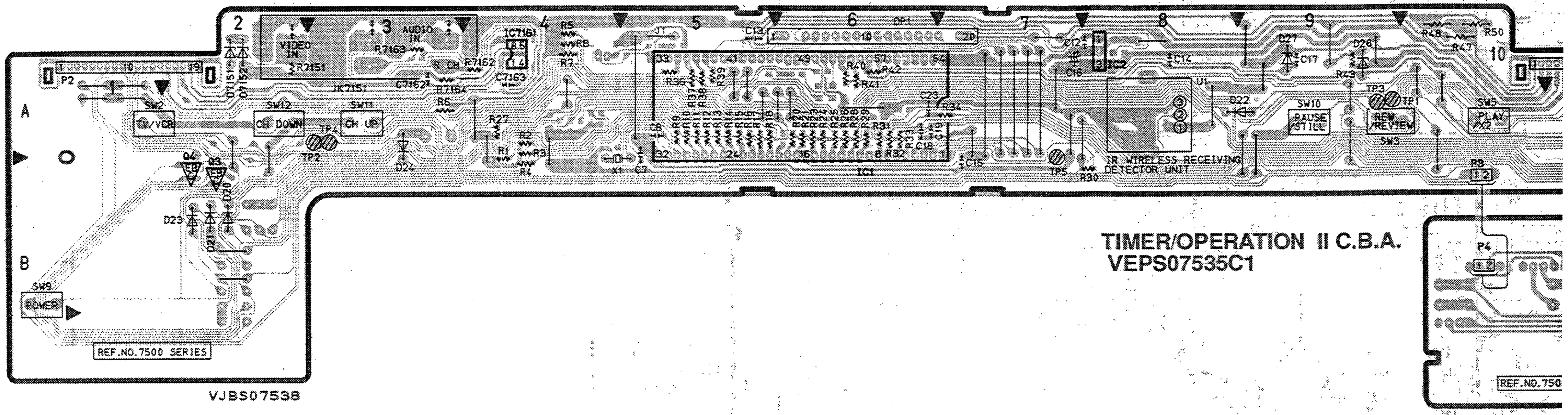


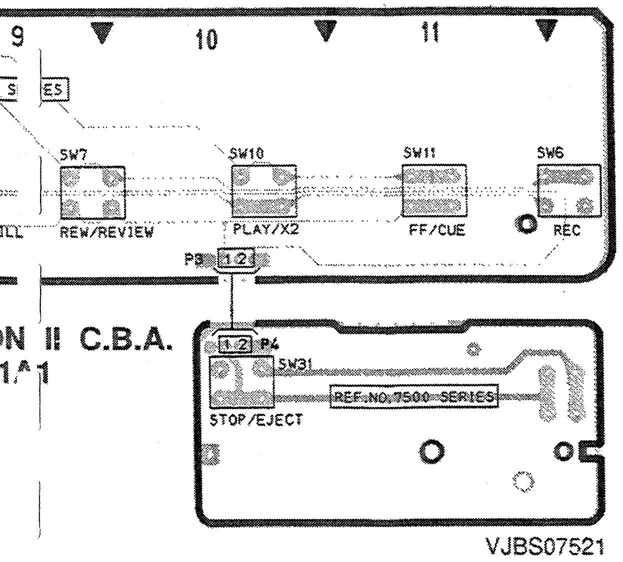

REF.NO.7500 SERIES
SW7
REW /REVIEW
SW10
PLAY /X2
SW11
FF /CUE
SW6
REC
P3
P4
STOP /EJECT
SW32
REF.NO.7500 SERIES
VJBS07535
I C.B.A.

TIMER/OPERATION I/II C.B.A.(E)

TEST POINT INFORMATION
⦶ : TEST POINT WITH A JUMPER WIRE ACROSS A HOLE IN P.C.B.
▭→ : TEST POINT WITH A COMPONENT LEAD ON THE FOIL SIDE.
⊘ : TEST POINT WITH NO TEST PIN.
● : TEST POINT WITH A TEST PIN.

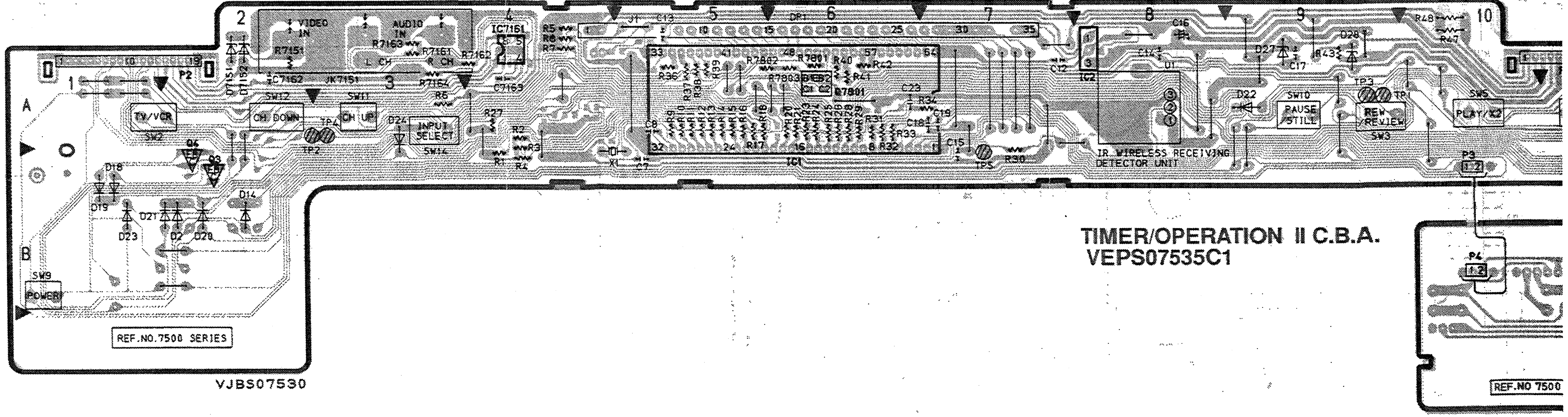
TIMER/OPERATION I C.B.A. VEPS07538A1


VIDEO IN
AUDIO IN
R7151
R7163
JK7151
C7162
R CH
R7162
R7164
C7163
IC7151
D7151
D7152
P2
SW2
TV/VCR
SW12
CH DOWN
SW11
CH UP
TP4
TP2
Q4
Q3
D20
D23
D21
D24
SW9
POWER
REF.NO.7500 SERIES
VJBS07538
R5
R6
R7
R27
R1
R2
R3
R4
J1
C13
DP1
IC1
X1
C7
C8
C15
C16
C12
IC2
C14
U1
IR WIRELESS RECEIVING DETECTOR UNIT
TP5
R30
D22
D27
C17
D26
R43
SW10
PAUSE /STILL
TP3
TP1
REW /REVIEW
SW3
SW5
PLAY /X2
R48
R47
R50
P3
P4
REF.NO.750
TIMER/OPERATION II C.B.A.
VEPS07535C1


SW7
REW/REVIEW
SW10
PLAY/X2
SW11
FF/CUE
SW6
REC
P3
P4
SW31
STOP/EJECT
REF.NO.7500 SERIES
VJBS07521
ON II C.B.A.
1^1

TIMER/OPERATION I/II C.B.A.(I)

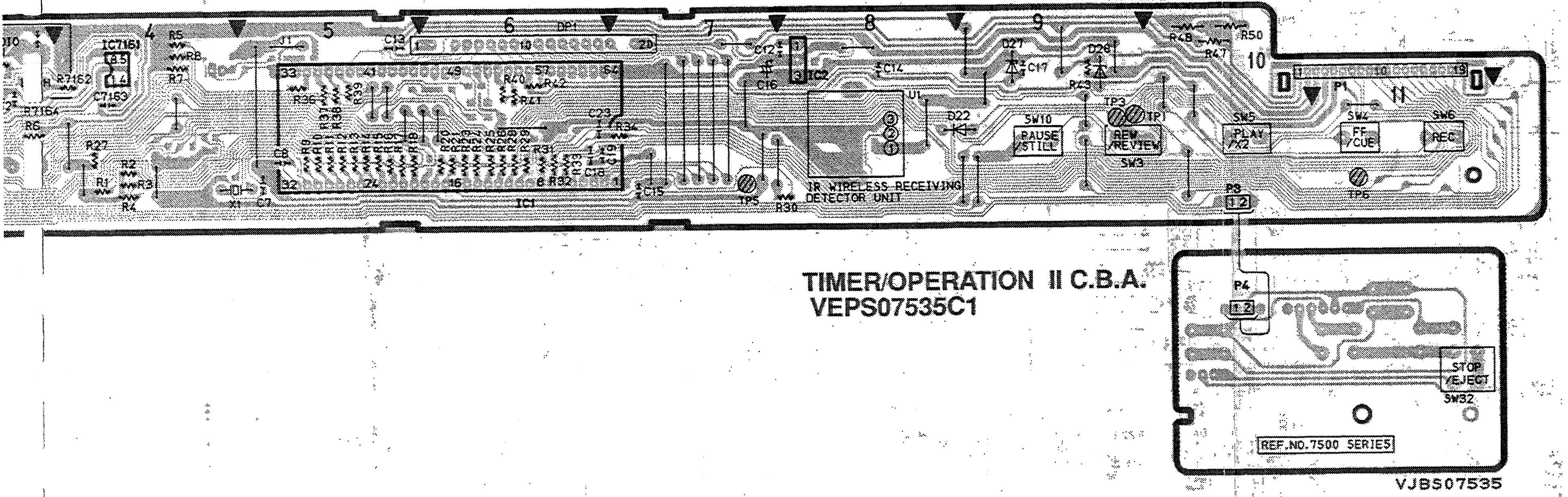
TIMER/OPERATION I C.B.A. VEPS07530B1


VIDEO IN
AUDIO IN
R7151
R7163
JK7151
C7162
L CH
R CH
R7161
R7162
R7164
C7163
IC7151
D7151
D7152
P2
SW2
TV/VCR
SW12
CH DOWN
SW11
CH UP
TP4
TP2
D24
INPUT SELECT
SW14
Q4
Q3
D18
D19
D21
D23
D2
D20
D14
SW9
POWER
REF.NO.7500 SERIES
VJBS07530
R5
R6
R7
R27
R1
R2
R3
R4
J1
C13
DP1
IC1
X1
C7
C8
C15
TP5
R30
R7801
R7802
R7803
D7801
D7802
C12
IC2
C14
U1
C16
IR WIRELESS RECEIVING DETECTOR UNIT
D22
D27
C17
D28
R43
SW10
PAUSE /STILL
TP3
TP1
REW /REVIEW
SW3
SW5
PLAY/X2
R48
R47
P3
P4
REF.NO 7500
TIMER/OPERATION II C.B.A.
VEPS07535C1

A.(E)

TEST POINT INFORMATION
Ⓘ : TEST POINT WITH A JUMPER WIRE ACROSS A HOLE IN P.C.B.
▭→ : TEST POINT WITH A COMPONENT LEAD ON THE FOIL SIDE.
⊘ : TEST POINT WITH NO TEST PIN.
● : TEST POINT WITH A TEST PIN.

3A


4
5
6
7
8
9
10
11
IC7161
IC1
IC2
DP1
SW10 PAUSE /STILL
SW3 REW /REVIEW
SW5 PLAY /X2
SW4 FF /CUE
SW6 REC
SW32 STOP /EJECT
IR WIRELESS RECEIVING DETECTOR UNIT
TP1
TP3
TP5
TP6
P1
P3
P4
X1
REF.NO.7500 SERIES
VJBS07535

TIMER/OPERATION II C.B.A.
VEPS07535C1

LEADLESS COMPONENT PARTS LOCATION GUIDE
TIMER/OPERATION I C.B.A.

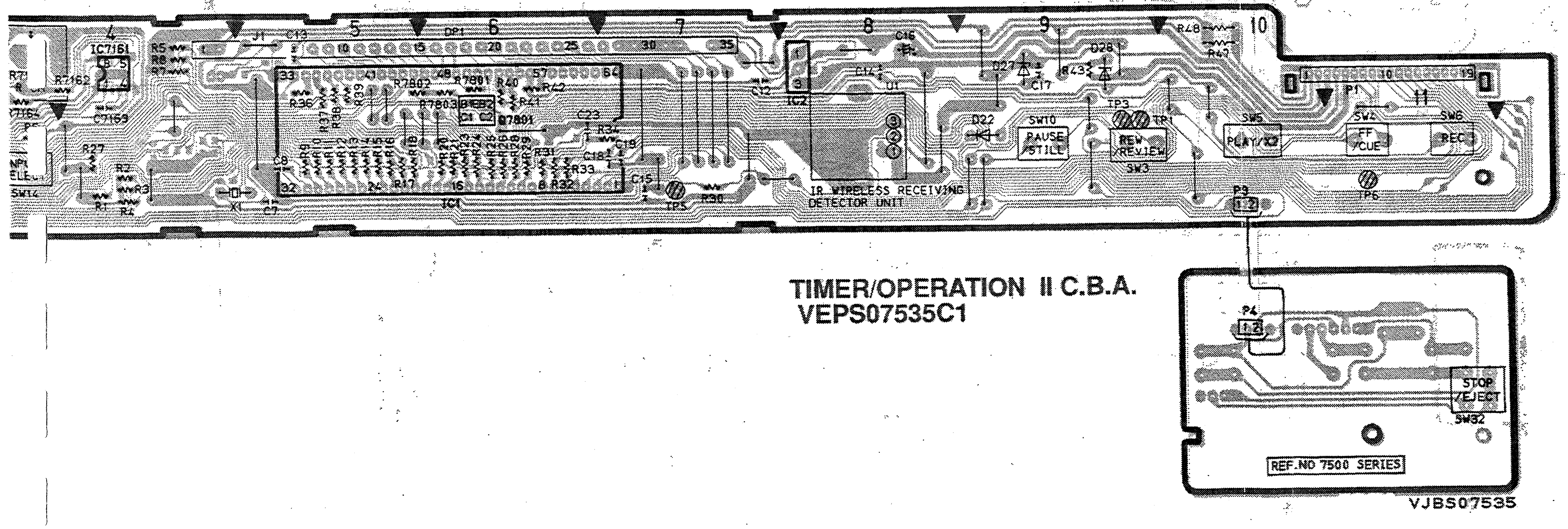
R7151	A-2	R7515	A-5	R7538	A-5
R7162	A-4	R7516	A-5	R7539	A-5
R7163	A-3	R7517	A-5	R7540	A-6
R7164	A-3	R7518	A-5	R7541	A-6
R7501	A-4	R7520	A-6	R7542	A-6
R7502	A-4	R7521	A-6	R7543	A-9
R7503	A-4	R7523	A-6	C7162	A-3
R7504	B-4	R7526	A-6	C7163	A-4
R7505	A-4	R7527	A-4	C7507	B-5
R7506	A-3	R7528	A-6	C7508	A-5
R7507	A-4	R7529	A-6	C7512	A-7
R7508	A-4	R7530	A-8	C7513	A-5
R7509	A-5	R7531	A-6	C7514	A-8
R7510	A-5	R7532	A-6	C7515	B-7
R7511	A-5	R7533	A-6	C7517	A-9
R7512	A-5	R7534	A-7	C7518	A-6
R7513	A-5	R7536	A-5	C7519	A-6
R7514	A-5	R7537	A-5	C7523	A-6

COMPARISON CHART
OF MODELS & MARKS

MODEL	MARK
PV-4308	A
PV-4311	B
PV-4311-K	C
PV-4315S	D
PV-4325S	E
PV-4351	F
PV-4351-K	G
PV-4358	H
PV-4355S	I

A (I)

B


4
5
6
7
8
9
10
11
IC7161
IC1
IC2
DP1
Q7801
SW10 PAUSE /STILL
SW3 REW /REVIEW
SW5 PLAY/X2
SW4 FF /CUE
SW6 REC
SW14
SW32 STOP /EJECT
IR WIRELESS RECEIVING DETECTOR UNIT
TP1
TP3
TP5
TP6
P1
P3
P4
X1
REF.NO 7500 SERIES
VJBS07535

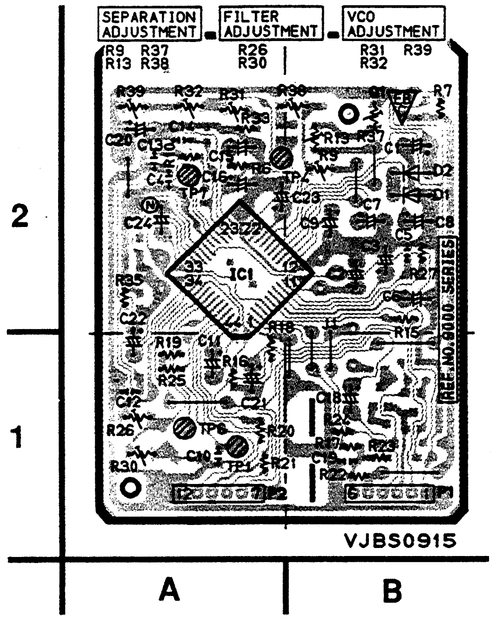
TIMER/OPERATION II C.B.A.
VEPS07535C1

LEADLESS COMPONENT PARTS LOCATION GUIDE
TIMER/OPERATION I C.B.A.

Q7503	B-2	R7512	A-5	R7534	A-7	C7517	A-9
Q7504	A-2	R7513	A-5	R7536	A-5	C7518	A-7
Q7801	A-6	R7514	A-5	R7537	A-5	C7519	A-7
R7151	A-2	R7515	A-5	R7538	A-5	C7523	A-6
R7161	A-3	R7516	A-5	R7539	A-5		
R7162	A-4	R7517	A-5	R7540	A-6		
R7163	A-3	R7518	A-5	R7541	A-6		
R7164	A-3	R7519	A-6	R7542	A-6		
R7501	B-4	R7520	A-6	R7543	A-9		
R7502	A-4	R7521	A-6	R7801	A-6		
R7503	A-4	R7523	A-6	R7802	A-5		
R7504	B-4	R7526	A-6	R7803	A-6		
R7505	A-4	R7527	A-4	C7162	A-2		
R7506	A-3	R7528	A-6	C7163	A-4		
R7507	A-4	R7529	A-6	C7507	B-5		
R7508	A-4	R7530	B-7	C7508	A-5		
R7509	A-5	R7531	A-6	C7512	A-7		
R7510	A-5	R7532	A-6	C7514	A-8		
R7511	A-5	R7533	A-6	C7515	B-7		

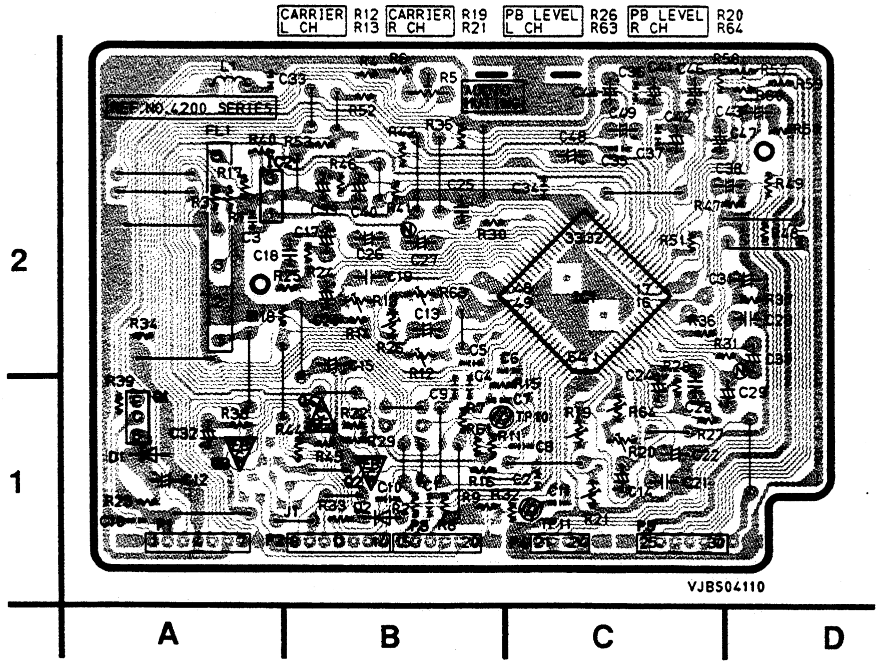
MTS/SAP C.B.A. VEPS0915A1 (F)

NOTE:
THE FOLLOWING PARTS ON THE MTS/SAP C.B.A. ARE NOT SUPPLIED SEPARATELY.
PLEASE ORDER AND REPLACE WITH CIRCUIT BOARD ASSEMBLY INSTEAD OF INDIVIDUAL PARTS.
(IC9001 , R9009 , R9013 , R9026 , R9030 , R9031 , R9032 , R9037 , R9038 , R9039)


SEPARATION ADJUSTMENT
R9 R37
R13 R38
FILTER ADJUSTMENT
R26
R30
VCO ADJUSTMENT
R31 R39
R32
IC1
REF.NO.9000 SERIES
VJBS0915
2
1
A
B

MTS/SAP	
TRANSISTOR	
Q1	B-2
IC	
IC1	A-2
CONNECTOR	
P1	B-1
P2	A-1
TEST POINT	
TP1	A-1
TP4	B-2
TP6	A-1
TP7	A-2
ADJUSTMENT	
R9	B-2
R13	B-2
R26	A-1
R30	A-1
R31	A-2
R32	A-2
R37	B-2
R38	B-2
R39	A-2

Hi-Fi AUDIO C.B.A. VEPS04110A1 (F,G,H,I)

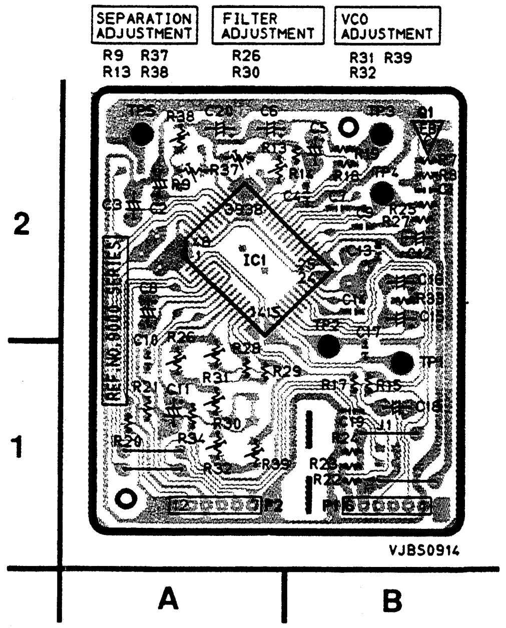

CARRIER L CH
R12
R13
CARRIER R CH
R19
R21
PB LEVEL L CH
R26
R63
PB LEVEL R CH
R20
R64
REF.NO.4200 SERIES
VJBS04110
2
1
A
B
C
D

Hi-Fi AUDIO	
TRANSISTOR	
Q1	A-1
Q2	B-1
Q3	A-1
Q4	B-1
IC	
IC1	C-2
IC2	B-2
CONNECTOR	
P1	A-1
P2	A-1
P3	B-1
P4	C-1
P5	C-1
TEST POINT	
TP10	C-1
TP11	C-1
ADJUSTMENT	
R5	B-3

MTS/SAP C.B.A. VEPS0914A1 (

LEADLESS COMPONENT PARTS
LOCATION GUIDE
MTS/SAP C. B. A.

Q9001	B-2	R9026	A-1
R9006	A-2	R9027	B-2
R9007	B-2	R9030	A-1
R9009	B-2	R9031	A-2
R9010	A-2	R9032	A-2
R9013	B-2	R9033	A-2
R9015	B-2	R9035	A-2
R9016	A-1	R9037	B-2
R9017	B-1	R9038	B-2
R9018	A-1	R9039	A-1
R9019	A-1	C9004	A-2
R9020	A-1	C9005	B-2
R9021	A-1	C9010	A-1
R9022	B-1	C9012	A-1
R9023	B-2	C9013	A-2
R9024	B-2	C9014	A-2
R9025	A-1	C9019	B-1


SEPARATION ADJUSTMENT
R9 R37
R13 R38
FILTER ADJUSTMENT
R26
R30
VCO ADJUSTMENT
R31 R39
R32
IC1
REF.NO.9000 SERIES
VJBS0914
2
1
A
B

NOTE:
THE FOLLOWING PARTS ON THE Hi-Fi AUDIO C.B.A. ARE NOT SUPPLIED SEPARATELY.
PLEASE ORDER AND REPLACE WITH CIRCUIT BOARD ASSEMBLY INSTEAD OF INDIVIDUAL PARTS.
(IC4201 , R4212 , R4213 , R4219 , R4220 , R4221 , R4226 , R4263 , R4264)

LEADLESS COMPONENT PARTS LOCATION GUIDE
Hi-Fi AUDIO C. B. A.

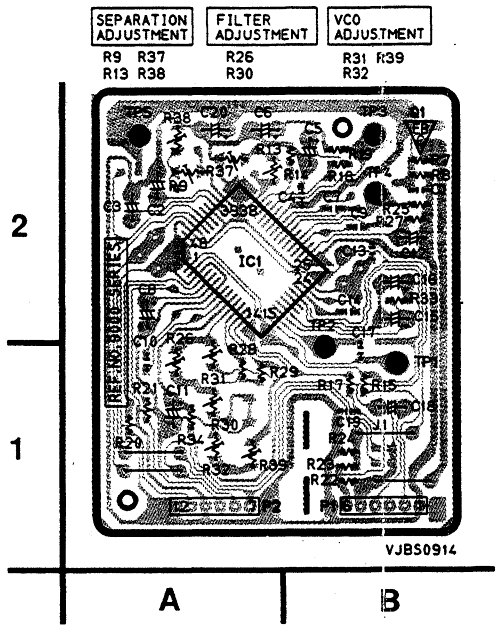
Q4202	B-1	R4214	B-2	R4228	C-2	R4242	B-3	R4260	D-3	C4211	C-1
Q4203	A-1	R4215	C-1	R4229	B-1	R4244	B-1	R4261	B-1	C4216	A-1
Q4204	B-1	R4216	B-1	R4230	B-2	R4245	B-1	R4263	B-2	C4233	B-3
R4201	A-2	R4217	A-2	R4231	D-2	R4246	B-3	R4264	C-1	C4234	C-2
R4202	B-1	R4218	A-2	R4232	C-1	R4247	C-2	C4201	B-1	C4235	C-3
R4203	A-2	R4219	C-1	R4233	B-1	R4248	D-2	C4202	C-1	C4236	C-3
R4204	B-3	R4220	C-1	R4234	A-2	R4249	D-2	C4203	A-2	C4237	C-3
R4206	B-3	R4221	C-1	R4235	B-3	R4250	D-3	C4204	B-2		
R4207	B-1	R4222	B-1	R4236	C-2	R4251	C-2	C4205	B-2		
R4208	B-1	R4223	A-1	R4237	D-2	R4252	B-3	C4206	C-2		
R4209	B-1	R4224	B-2	R4238	A-1	R4253	B-3	C4207	C-1		
R4211	C-1	R4225	B-2	R4239	A-1	R4257	D-3	C4208	C-1		
R4212	B-2	R4226	B-2	R4240	A-3	R4258	D-3	C4209	B-1		
R4213	B-2	R4227	C-1	R4241	B-2	R4259	D-3	C4210	B-1		

MTS/SAP C.B.A. VEPS0914A1 (G,H,I)

HE MTS/SAP C.B.A. ARE NOT SUPPLIED SEPARATELY.
E WITH CIRCUIT BOARD ASSEMBLY INSTEAD OF INDIVIDUAL PARTS.
13 , R9026 , R9030 , R9031 , R9032 , R9037 , R9038 , R9039)

LEADLESS COMPONENT PARTS
LOCATION GUIDE
MTS/SAP C. B. A.

Q9001	B-2	R9026	A-1
R9006	A-2	R9027	B-2
R9007	B-2	R9030	A-1
R9009	B-2	R9031	A-2
R9010	A-2	R9032	A-2
R9013	B-2	R9033	A-2
R9015	B-2	R9035	A-2
R9016	A-1	R9037	B-2
R9017	B-1	R9038	B-2
R9018	A-1	R9039	A-1
R9019	A-1	C9004	A-2
R9020	A-1	C9005	B-2
R9021	A-1	C9010	A-1
R9022	B-1	C9012	A-1
R9023	B-2	C9013	A-2
R9024	B-2	C9014	A-2
R9025	A-1	C9019	B-1


SEPARATION ADJUSTMENT
R9 R37
R13 R38
FILTER ADJUSTMENT
R26
R30
VCO ADJUSTMENT
R31 R39
R32
TP5
R38
C20
C6
C5
TP3
Q1
R37
R13
R9
C3
C2
IC1
TP4
C13
C8
C16
R33
C14
C15
TP2
C17
C10
R26
R28
R29
TP1
R31
R17
R15
R21
C11
C18
REF. NO. 9000 SERIES
R30
C19
J1
R20
R34
R24
R32
R39
R23
R22
P2
P1
VJBS0914
2
1
A
B

MTS/SAP	
TRANSISTOR	
Q1	B-2
IC	
IC1	A-2
CONNECTOR	
P1	A-1
P2	B-1
TEST POINT	
TP1	B-1
TP2	B-2
TP3	B-2
TP4	B-2
TP5	A-2
ADJUSTMENT	
R9	A-2
R13	A-2
R26	A-1
R30	A-1
R31	A-1
R32	A-1
R37	A-2
R38	A-2
R39	A-1

TEST POINT INFORMATION
⦶ : TEST POINT WITH A JUMPER WIRE ACROSS A HOLE IN P.C.B.
▭→ : TEST POINT WITH A COMPONENT LEAD ON THE FOIL SIDE.
⊘ : TEST POINT WITH NO TEST PIN.
● : TEST POINT WITH A TEST PIN.

LEADLESS COMPONENT PARTS
LOCATION GUIDE
MTS/SAP C. B. A.

Q9001	B-2	R9029	B-1
R9007	B-2	R9030	A-1
R9008	B-2	R9031	A-1
R9009	A-2	R9032	A-1
R9013	A-2	R9033	B-2
R9014	B-2	R9034	A-1
R9015	B-1	R9037	A-2
R9017	B-1	R9038	A-2
R9018	B-2	R9039	A-1
R9019	B-2	C9001	A-1
R9020	A-1	C9004	B-2
R9021	A-1	C9007	B-2
R9022	B-1	C9009	B-2
R9024	B-1	C9010	A-1
R9025	B-2	C9013	B-2
R9026	A-1	C9014	B-2
R9027	B-2	C9017	B-2
R9028	A-1	C9019	B-1

NOTE:
THE FOLLOWING PARTS ON THE Hi-Fi AUDIO C.B.A. ARE NOT SUPPLIED SEPARATELY.
PLEASE ORDER AND REPLACE WITH CIRCUIT BOARD ASSEMBLY INSTEAD OF INDIVIDUAL PARTS.
(IC4201 , R4212 , R4213 , R4219 , R4220 , R4221 , R4226 , R4263 , R4264)

NOTE:
THE PARTS MARKED "-⋀⋀⋀-" INDICATE THAT A TRIMMING ADJUSTMENT WAS MADE AT THE FACTORY.
DO NOT TRY TO READJUST THEM.

LEADLESS COMPONENT PARTS LOCATION GUIDE
Hi-Fi AUDIO C. B. A.

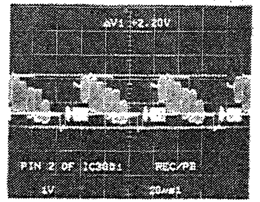
Q4202	B-1	R4214	B-2	R4228	C-2	R4242	B-3	R4260	D-3	C4211	C-1
Q4203	A-1	R4215	C-1	R4229	B-1	R4244	B-1	R4261	B-1	C4216	A-1
Q4204	B-1	R4216	B-1	R4230	B-2	R4245	B-1	R4263	B-2	C4233	B-3
R4201	A-2	R4217	A-2	R4231	D-2	R4246	B-3	R4264	C-1	C4234	C-2
R4202	B-1	R4218	A-2	R4232	C-1	R4247	C-2	C4201	B-1	C4235	C-3
R4203	A-2	R4219	C-1	R4233	B-1	R4248	D-2	C4202	C-1	C4236	C-3
R4204	B-3	R4220	C-1	R4234	A-2	R4249	D-2	C4203	A-2	C4237	C-3
R4206	B-3	R4221	C-1	R4235	B-3	R4250	D-3	C4204	B-2		
R4207	B-1	R4222	B-1	R4236	C-2	R4251	C-2	C4205	B-2		
R4208	B-1	R4223	A-1	R4237	D-2	R4252	B-3	C4206	C-2		
R4209	B-1	R4224	B-2	R4238	A-1	R4253	B-3	C4207	C-1		
R4211	C-1	R4225	B-2	R4239	A-1	R4257	D-3	C4208	C-1		
R4212	B-2	R4226	B-2	R4240	A-3	R4258	D-3	C4209	B-1		
R4213	B-2	R4227	C-1	R4241	B-2	R4259	D-3	C4210	B-1		

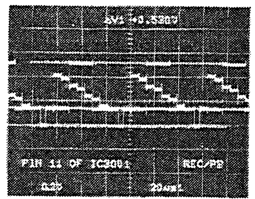
COMPARISON CHART
OF MODELS & MARKS

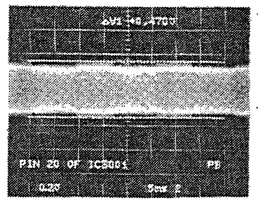
MODEL	MARK
PV-4308	A
PV-4311	B
PV-4311-K	C
PV-4315S	D
PV-4325S	E
PV-4351	F
PV-4351-K	G
PV-4358	H
PV-4355S	I

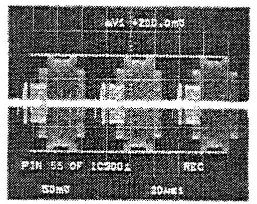
WAVEFORM PHOTOGRAPH

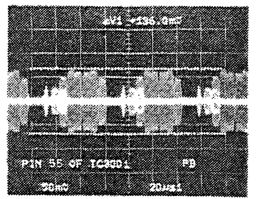
MAIN C.B.A. (A,B,C,D,E)

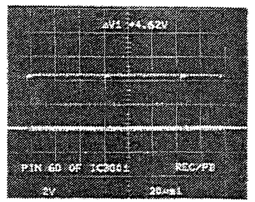

WF1

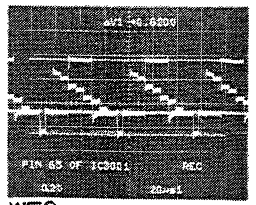

WF2

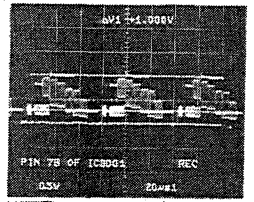

WF3


WF4


WF4


WF5


WF6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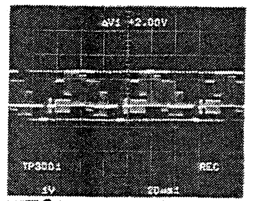
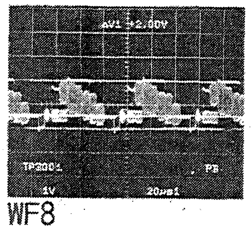
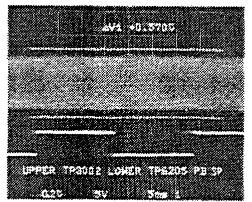
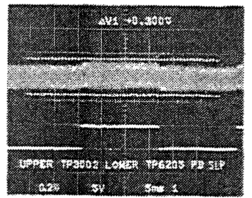
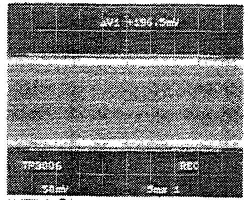
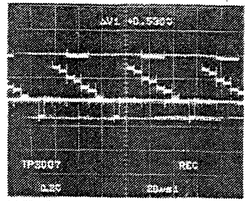

WF8

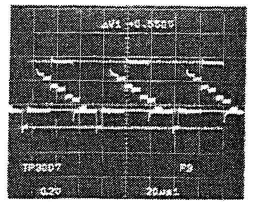

WF8

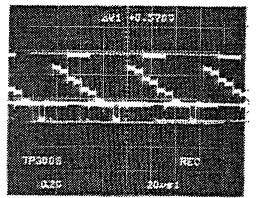

UPPER WF9
LOWER WF33

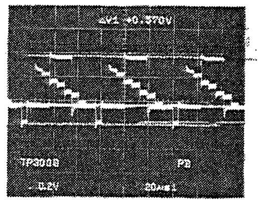

UPPER WF9
LOWER WF33

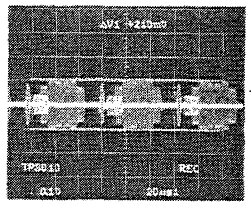

WF10

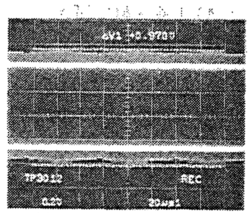

WF11


WF11

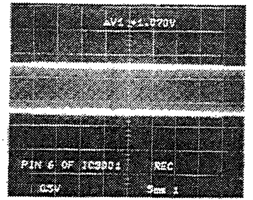

WF12

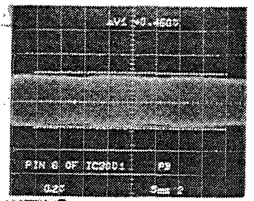

WF12


WF13


WF14

MAIN C.B.A. (F,G,H,I)


WF15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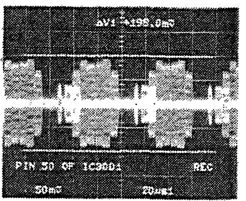
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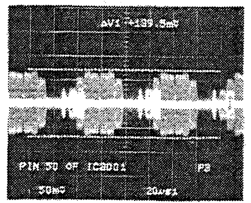
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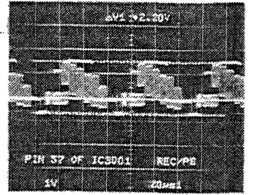
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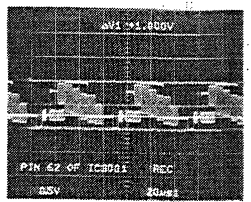
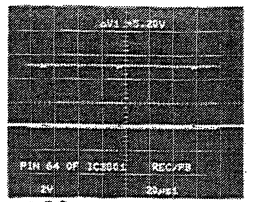

WF19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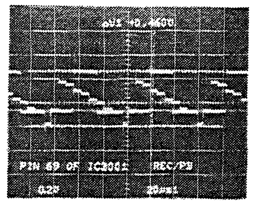
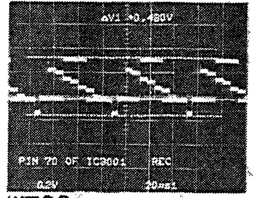

WF21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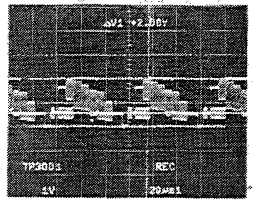
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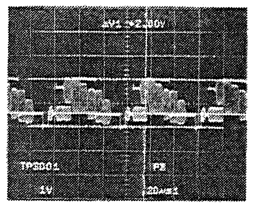
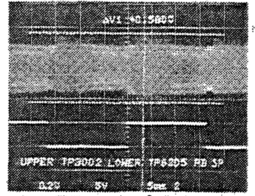
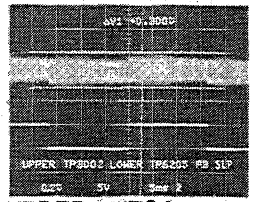
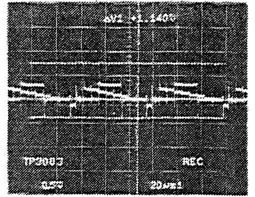
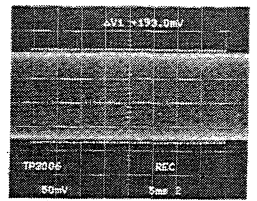
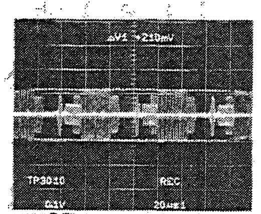

WF23


UPPER WF24
LOWER WF33

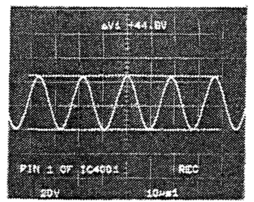

UPPER WF24
LOWER WF33

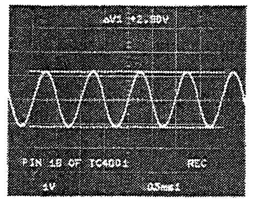

WF25

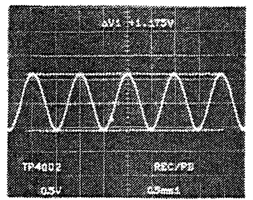

WF26

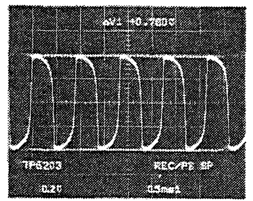

WF27

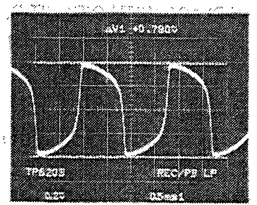
MAIN C.B.A.

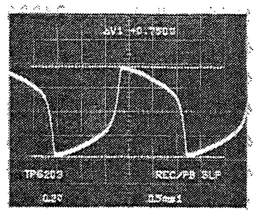

WF28


WF29


WF30


WF31


WF31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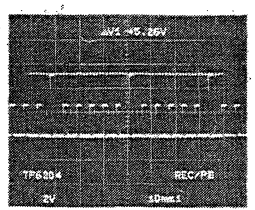
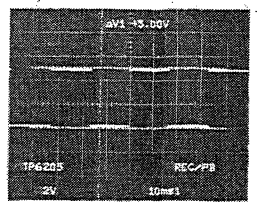

WF32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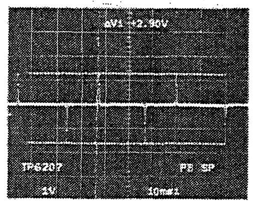
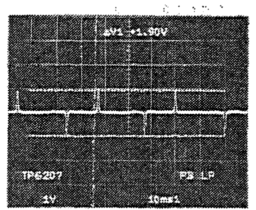
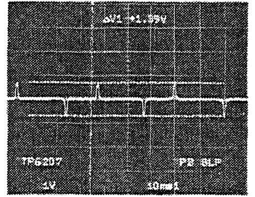
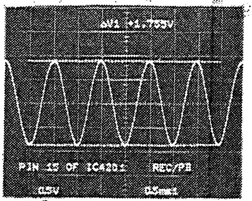
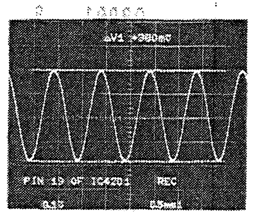

WF34

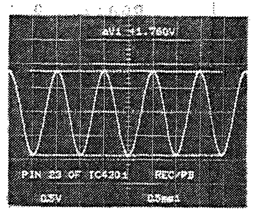

WF34

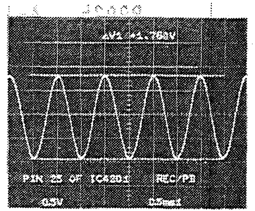

WF34

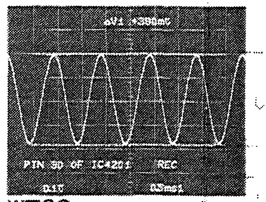
Hi-Fi AUDIO C.B.A. (F,G,H,I)

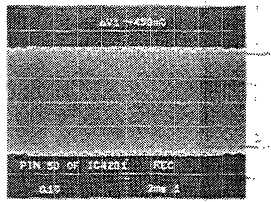

WF35

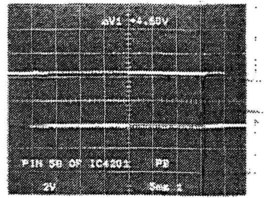

WF36

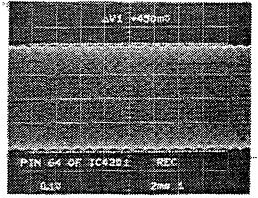

WF37


WF38

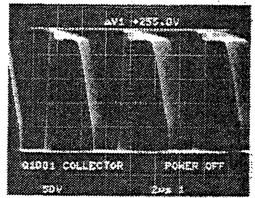

WF39

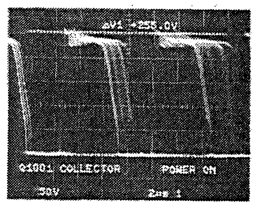

WF40


WF41

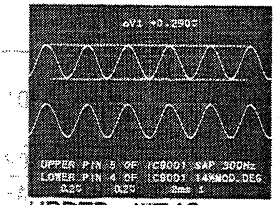

WF42

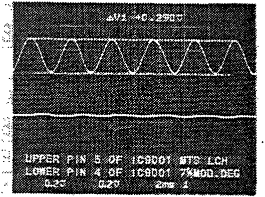
POWER SUPPLY ASS'Y

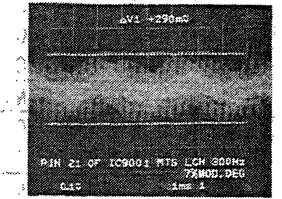

WF46

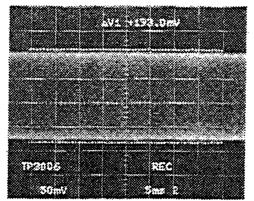

WF46

MTS/SAP C.B.A. (G,H,I)

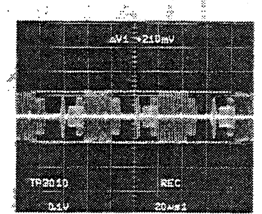

UPPER WF43
LOWER WF44


UPPER WF43
LOWER WF44


WF45

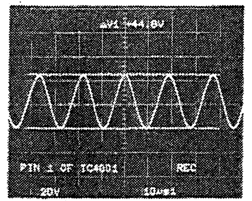


WF26

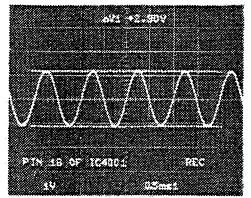


WF27

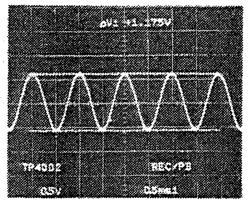
MAIN C.B.A.



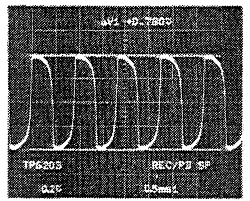
WF28



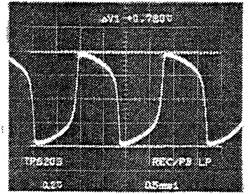
WF29



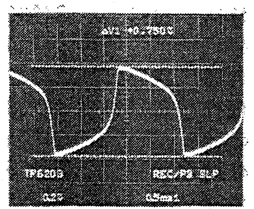
WF30



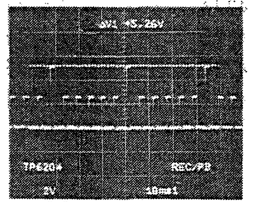
WF31



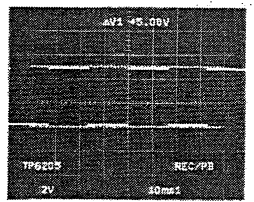
WF31



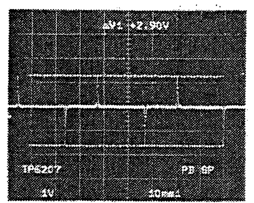
WF31



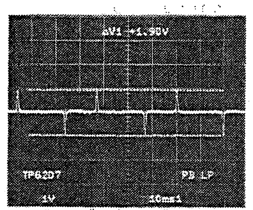
WF32



WF33



WF34



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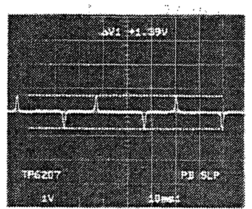
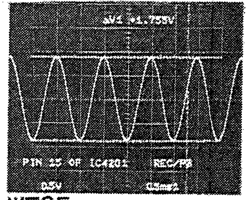
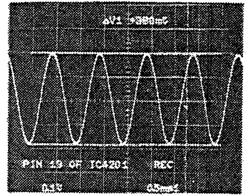


WF34

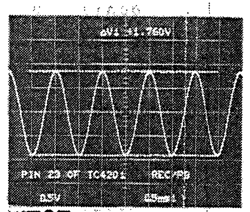
Hi-Fi AUDIO C.B.A. (F, G, H, I)



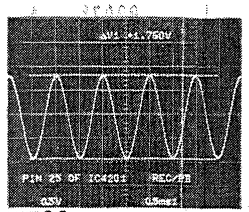
WF35



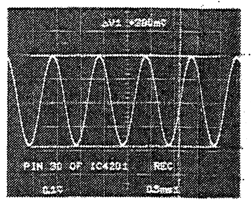
WF36



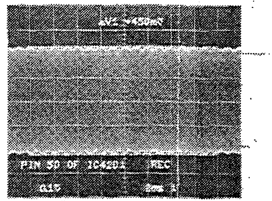
WF37



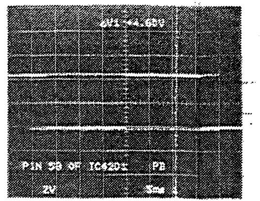
WF38



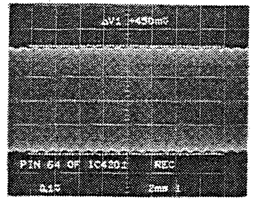
WF39



WF40

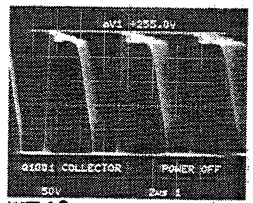


WF41

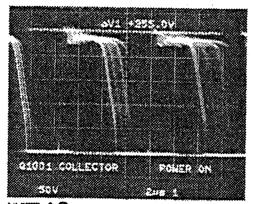


WF42

POWER SUPPLY ASS'Y

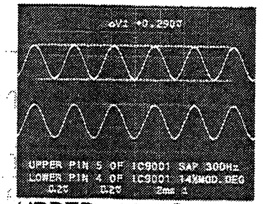


WF46

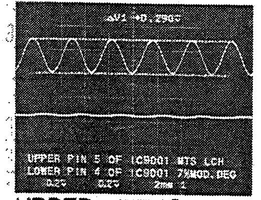


WF46

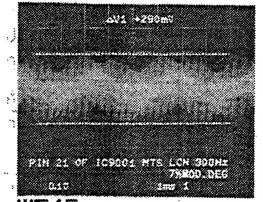
MTS/SAP C.B.A. (G, H, I)



UPPER WF43
LOWER WF44

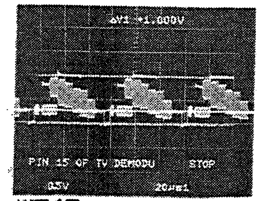


UPPER WF43
LOWER WF44

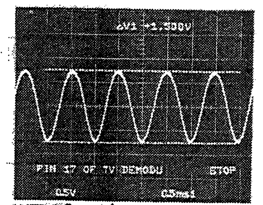


WF45

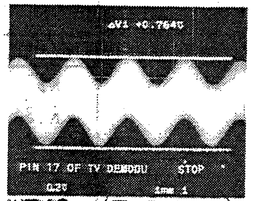
UHF/VHF TUNER/TV DEMODULATOR UNIT



WF47

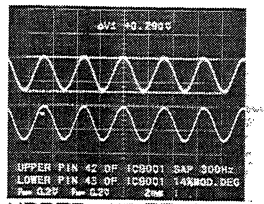


WF48 (A, B, C, D, E)

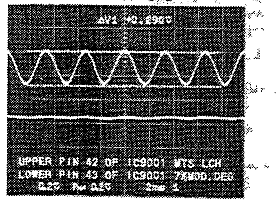


WF48 (F, G, H, I)

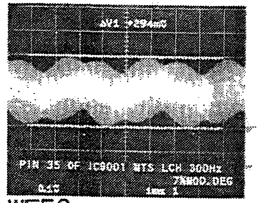
MTS/SAP C.B.A. (F)



UPPER WF57
LOWER WF58

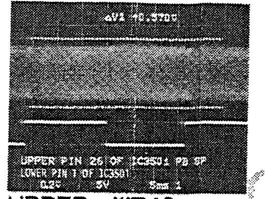


UPPER WF57
LOWER WF58

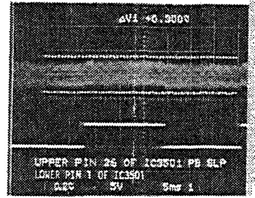


WF59

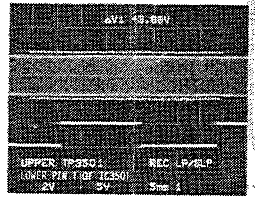
HEAD AMP ASS'Y (A, B, C, D, E)



UPPER WF49
LOWER WF50

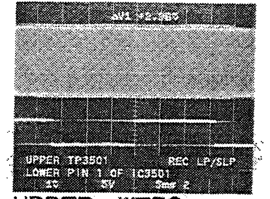


UPPER WF49
LOWER WF50

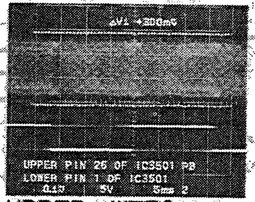


UPPER WF51
LOWER WF50

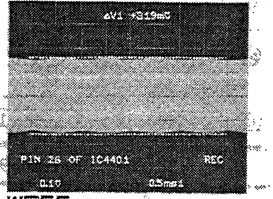
Hi-Fi AUDIO/VIDEO HEAD AMP ASS'Y (F, G, H, I)



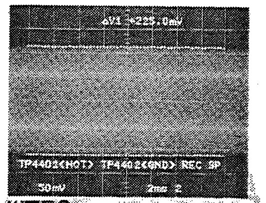
UPPER WF52
LOWER WF54



UPPER WF53
LOWER WF54



WF55



WF56

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-4308	A
PV-4311	B
PV-4311-K	C
PV-4315S	D
PV-4325S	E
PV-4351	F
PV-4351-K	G
PV-4358	H
PV-4355S	I

VOLTAGE CHART (SYSTEM CONTROL/SERVO) (A,B,C,D,F,G,H)

MODE / PIN NO.	STOP	FF	REW
IC2501			
1	2.8	4.1	4.1
2	0	14.2	14.2
3	14.4	13.9	13.9
4	13.9	13.9	13.9
5	14.4	13.9	13.9
6	—	—	—
7	0.7	0.7	0.7
8	0	0	0
9	0.1	0.8	0.8
10	0	0.3	0.3
11	0.6	0.6	0.6
12	—	—	—
13	3.2	3.2	3.2
14	5.2	5.2	5.2
15	1.1	2.5	2.5
16	2.7	2.7	2.7
17	2.7	5.1	0.1
18	1.8	1.8	1.8
19	1.6	1.6	1.6
20	1.6	1.6	1.6
21	1.7	1.7	1.7
22	1.6	1.6	1.6
23	1.6	1.6	1.6
24	1.6	1.6	1.6
25	—	—	—
26	2.8	5.3	4.1
27	0	0.2	0.2
28	2.8	5.3	4.1
IC2502			
1	14.5	13.9	13.9
2	2.8	4.1	4.1
3	14.5	14.2	14.2
4	14.0	13.9	13.9
5	2.8	4.1	4.1
6	14.5	14.2	14.2
7	14.5	13.9	13.9
8	2.8	4.1	4.1

MODE / PIN NO.	STOP	FF	REW
IC2601			
1	14.0	14.0	14.0
2	14.0	14.0	14.0
3	0	0	0
4	0.6	0.6	0.6
5	0	0	0
6	2.7	2.7	2.7
7	2.6	2.6	2.6
8	1.4	1.4	1.4
9	1.0	1.0	1.0
10	2.8	2.8	2.8
11	5.2	5.2	5.2
12	3.9	3.9	3.9
13	3.9	3.9	3.9
14	3.9	3.9	3.9
15	1.2	1.2	1.2
16	14.5	14.5	14.5
17	14.0	14.0	14.0
18	0	0	0
IC6001			
1	—	—	—
2	5.1	5.1	5.1
3	0.2	0.2	0.2
4	0.4	0.4	0.4
5	5.2	5.2	5.2
6	0.3	0.3	0.3
7	—	—	—
8	0	0	0
9	0	0	0
10	0	0	0
11	0	0	0
12	5.1	5.1	5.1
13	5.1	5.1	5.1
14	2.6	5.1	5.1
15	5.1	5.1	5.1
16	0.1	0.1	0.1
17	4.8	4.8	4.8
18	5.2	5.2	5.2
19	4.9	4.9	4.9
20	5.1	5.1	5.1
21	0	0	0
22	2.7	2.7	2.7
23	0.1	0.1	0.1
24	2.7	2.7	2.7
25	0	2.6	2.6
26	2.6	2.6	2.6
27	2.6	2.6	2.6
28	3.8	3.8	3.8
29	1.6	1.6	1.6
30	—	—	—
(A, B, C, D)			
30	0.4	0.4	0.4
(F, G, H)			
31	1.3	1.3	1.3
32	2.1	2.1	2.1
33	0	0	0
34	0	5.1	5.1
35	0	0	0
36	0.1	0.1	0.1
37	—	—	—
38	5.1	2.4	2.4

MODE / PIN NO.	STOP	FF	REW
39	1.1	2.4	2.4
40	2.7	0.1	5.1
41	5.1	5.1	5.1
42	0.9	0.9	0.9
43	3.3	3.3	3.3
44	3.1	2.7	2.7
45	2.7	2.7	2.7
46	2.7	2.7	2.7
47	1.2	1.2	1.2
48	0	0	0
49	0	0	0
50	2.7	2.7	2.7
51	2.7	2.7	2.7
52	2.7	2.7	2.7
53	2.9	2.9	2.9
54	—	—	—
55	0	0	0
56	0	0	0
57	0	0	0
58	2.7	2.7	2.7
59	2.7	2.7	2.7
60	0	0	0
61	2.7	2.7	2.7
62	2.7	2.7	2.7
63	5.2	5.2	5.2
64	1.1	1.1	1.1
65	5.2	5.2	5.2
66	5.0	5.0	5.0
67	5.2	5.2	5.2
68	4.9	—	—
69	0	0	0
70	0	0	0
71	0.5	0.5	0.5
72	0	0	0
73	5.2	5.2	5.2
74	5.2	5.2	5.2
75	5.2	5.2	5.2
76	5.2	5.2	5.2
77	5.2	5.2	5.2
78	5.2	0.2	0.2
79	5.2	5.2	5.2
80	0.2	5.2	5.2
81	5.2	0.2	0.2
82	2.6	2.6	2.6
83	5.2	0.1	0.1
84	0.1	0.1	0.1
IC6003			
1	0	0	0
2	0	0	0
3	0	0	0
4	—	—	—
5	0	0	0
6	14.5	14.5	14.5
7	0.9	1.3	1.3
8	0	0	0
9	1.2	1.2	1.2
IC6004			
1	1.2	1.2	1.2
2	0	0	0
3	0	0	0
4	5.0	—	—

MODE / PIN NO.	STOP	FF	REW
IC6201			
1	2.6	2.6	2.6
2	2.6	2.6	2.6
3	2.6	2.6	2.6
4	0	0	0
5	1.2	2.7	2.7
6	1.2	2.7	2.7
7	1.1	2.5	2.5
8	5.2	5.2	5.2
Q6001			
E	0	0	0
C	5.2	5.2	5.2
B	—	—	—
Q6002			
E	0	0	0
C	5.0	5.0	5.0
B	—	—	—
Q6003			
E	0	0	0
C	9.4	9.4	9.4
B	0.3	0.3	0.3
Q6004			
E	5.2	5.2	5.2
C	5.2	5.2	5.2
B	4.4	4.4	4.4
Q6005			
E	5.2	5.2	5.2
C	5.2	5.2	5.2
B	0.1	0.1	0.1
Q6006			
E	0	0	0
C	5.1	5.1	5.1
B	0	0	0
Q6007			
E	0	0	0
C	0.1	0.1	0.1
B	5.3	5.3	5.3
Q6008			
E	12.0	12.0	12.0
C	0.1	0.1	0.1
B	12.0	12.0	12.0
Q6009			
E	0.4	0.4	0.4
C	12.0	12.0	12.0
B	0.1	0.1	0.1
Q6201			
E	1.1	2.5	2.5
C	1.1	2.6	2.6
B	0.5	5.1	5.1
Q6202			
(F, G, H)			
E	0	0	0
C	0.3	0	0
B	0.1	0.1	0.1
Q6203			
(F, G, H)			
E	0	0	0
C	0.1	0.1	0.1
B	3.7	3.7	3.7

MODE / PIN NO.	STOP	FF	REW
TP6001	4.9	—	—
TP6002	5.1	2.1	2.1
TP6003	0.1	0.1	0.1
TP6004	2.6	2.6	2.6
TP6008	0	0	0
TP6009	5.2	5.2	5.2
TP6010	0.9	0.9	0.9
TP6011	0	0	0
TP6012	5.0	—	—
TP6014	5.2	5.2	5.2
TP6015	5.0	5.0	5.0
TP6016	9.5	9.5	9.5
TP6201	2.7	2.7	2.7
TP6202	2.4	2.6	2.6
TP6203	2.7	2.7	2.7
TP6204	1.2	1.2	1.2
TP6205	2.8	2.8	2.8
TP6206	0	0	0
TP6207	2.7	2.7	2.7
TP6208	2.6	2.6	2.6
TP6209	1.1	2.5	2.5

VOLTAGE CHART (SYSTEM CONTROL/SERVO) (E,I)

MODE / PIN NO.	STOP	FF	REW
IC2501			
1	2.8	4.1	4.1
2	0	14.2	14.2
3	14.4	13.9	13.9
4	13.9	13.9	13.9
5	14.4	13.9	13.9
6	—	—	—
7	0.7	0.7	0.7
8	0	0	0
9	0.1	0.8	0.8
10	0	0.3	0.3
11	0.6	0.6	0.6
12	—	—	—
13	3.2	3.2	3.2
14	5.2	5.2	5.2
15	1.1	2.5	2.5
16	2.7	2.7	2.7
17	2.7	5.1	0.1
18	1.8	1.8	1.8
19	1.6	1.6	1.6
20	1.6	1.6	1.6
21	1.7	1.7	1.7
22	1.6	1.6	1.6
23	1.6	1.6	1.6
24	1.6	1.6	1.6
25	—	—	—
26	2.8	5.3	4.1
27	0	0.2	0.2
28	2.8	5.3	4.1
IC2502			
1	14.5	13.9	13.9
2	2.8	4.1	4.1
3	14.5	14.2	14.2
4	14.0	13.9	13.9
5	2.8	4.1	4.1
6	14.5	14.2	14.2
7	14.5	13.9	13.9
8	2.8	4.1	4.1
IC2601			
1	14.0	14.0	14.0
2	14.0	14.0	14.0
3	0	0	0
4	0.6	0.6	0.6
5	0	0	0
6	2.7	2.7	2.7
7	2.6	2.6	2.6
8	1.4	1.4	1.4
9	1.0	1.0	1.0
10	2.8	2.8	2.8
11	5.2	5.2	5.2
12	3.9	3.9	3.9
13	3.9	3.9	3.9
14	3.9	3.9	3.9
15	1.2	1.2	1.2
16	14.5	14.5	14.5
17	14.0	14.0	14.0
18	0	0	0
IC6001			
1	5.2	5.2	5.2
2	0	0	0
3	1.3	1.3	1.3
4	—	—	—
5	5.2	5.2	5.2
6	0.2	0.2	0.2
7	—	—	—
(E)			
7	0.2	0.2	0.2
(I)			
8	0	0	0
9	0	0	0
10	0	0	0
11	0	0	0
12	5.2	5.2	5.2
13	5.2	5.2	5.2
14	0.9	0.9	0.9
15	5.2	5.2	5.2
16	0.1	0.1	0.1
17	4.8	4.8	4.8
18	1.8	1.8	1.8
19	5.1	5.1	5.1
20	5.1	5.1	5.1
21	0	0	0
22	2.6	2.6	2.6
23	0.1	0.1	0.1
24	2.7	2.7	2.7
25	0	2.6	2.6
26	2.5	2.5	2.5
27	2.6	2.6	2.6
28	—	—	—
(E)			
28	0	2.6	2.6
(I)			
29	—	—	—
30	—	—	—
31	1.3	1.3	1.3
32	2.1	2.1	2.1
33	0	0	0
34	0	0	0
35	—	—	—
36	—	—	—
37	0	5.2	5.2
38	5.1	1.0	1.7
39	1.1	2.4	2.4
40	2.6	0.1	5.1
41	5.2	5.2	5.2
42	0	0	0
43	2.9	2.9	2.9
44	2.6	2.6	2.6
45	2.6	2.6	2.6
46	2.6	2.6	2.6
47	1.2	1.2	1.2
48	0	0	0
49	0	0	0
50	2.6	2.6	2.6
51	2.6	2.6	2.6
52	2.3	3.1	3.1
53	2.9	2.6	2.6
54	5.2	5.2	5.2
55	0	0	0
56	0	0	0
57	0	0	0
58	2.6	2.6	2.6
59	2.6	2.6	2.6
60	0	0	0
61	2.8	3.2	3.2
62	2.6	2.6	2.6
63	5.2	5.2	5.2
64	1.1	1.1	1.1
65	3.9	3.9	3.9
66	5.2	5.2	5.2
67	5.2	5.2	5.2
68	—	—	—
69	0	0	0
70	0	0	0
71	0	0	0
72	5.2	5.2	5.2
73	5.2	5.2	5.2
74	5.2	5.2	5.2
75	5.2	5.2	5.2
76	0	0	0
77	0	0	0
78	5.2	0.1	0.1
79	5.2	5.0	5.0
80	0	5.0	5.0
81	5.2	0.1	0.1
82	2.6	2.6	2.6
83	0	0	0
84	0	0.2	0.2
IC6003			
1	0	0	0
2	0	0	0
3	0	0	0
4	—	—	—
5	0	0	0
6	14.5	14.5	14.5
7	0.9	1.3	1.3
8	0	0	0
9	1.2	1.2	1.2
IC6004			
1	1.2	1.2	1.2
2	0	0	0
3	0	0	0
4	5.0	—	—
IC6201			
1	2.6	2.6	2.6
2	2.6	2.6	2.6
3	2.6	2.6	2.6
4	0	0	0
5	1.2	2.7	2.7
6	1.2	2.7	2.7
7	1.1	2.5	2.5
8	5.2	5.2	5.2
Q6001			
E	0	0	0
C	5.2	5.2	5.2
B	—	—	—
Q6002			
E	0	0	0
C	5.0	5.0	5.0
B	—	—	—
Q6003			
E	0	0	0
C	9.5	9.5	9.5
B	0.3	0.3	0.3
Q6004			
E	5.2	5.2	5.2
C	5.2	5.2	5.2
B	4.4	4.4	4.4
Q6005			
E	0	0	0
C	0.1	0.1	0.1
B	5.2	5.2	5.2
Q6006			
E	5.1	5.1	5.1
C	0	0	0
B	5.2	5.2	5.2
Q6007			
(E)			
E1	0	0	0
E2	12.0	12.0	12.0
C1	0.1	0.1	0.1
C2	0.1	0.1	0.1
B1	0	0	0
B2	0.1	0.1	0.1
Q6007			
(I)			
E	12.0	12.0	12.0
C	0.1	0.1	0.1
B	12.0	12.0	12.0
Q6015			
(I)			
E	0	0	0
C	12.0	12.0	12.0
B	0	0	0
Q6016			
E	5.2	5.2	5.2
C	0	0	0
B	5.2	5.2	5.2
Q6201			
E	1.1	2.5	2.5
C	1.1	2.6	2.6
B	0.5	5.1	5.1
TP6001	4.9	—	—
TP6002	5.1	2.1	2.1
TP6003	0.1	0.1	0.1
TP6007	3.9	3.9	3.9
TP6008	0	0	0
TP6009	5.2	5.2	5.2
TP6010	0.9	0.9	0.9
TP6011	0	0	0
TP6012	5.0	—	—
TP6014	5.2	5.2	5.2
TP6015	5.2	5.2	5.2
TP6016	9.5	9.5	9.5
TP6201	2.7	2.7	2.7
TP6202	2.4	2.6	2.6
TP6203	2.6	2.6	2.6
TP6204	1.2	1.2	1.2
TP6205	2.6	2.6	2.6
TP6206	0	0	0
TP6207	2.6	2.6	2.6
TP6208	2.6	2.6	2.6
TP6209	1.1	2.5	2.5

COMPARISON CHART
OF MODELS & MARKS

MODEL	MARK
PV-4308	A
PV-4311	B
PV-4311-K	C
PV-4315S	D
PV-4325S	E
PV-4351	F
PV-4351-K	G
PV-4358	H
PV-4355S	I

V. EXPLODED VIEWS

❶ Transport Section

Note 1 LUBRICATION POINTS

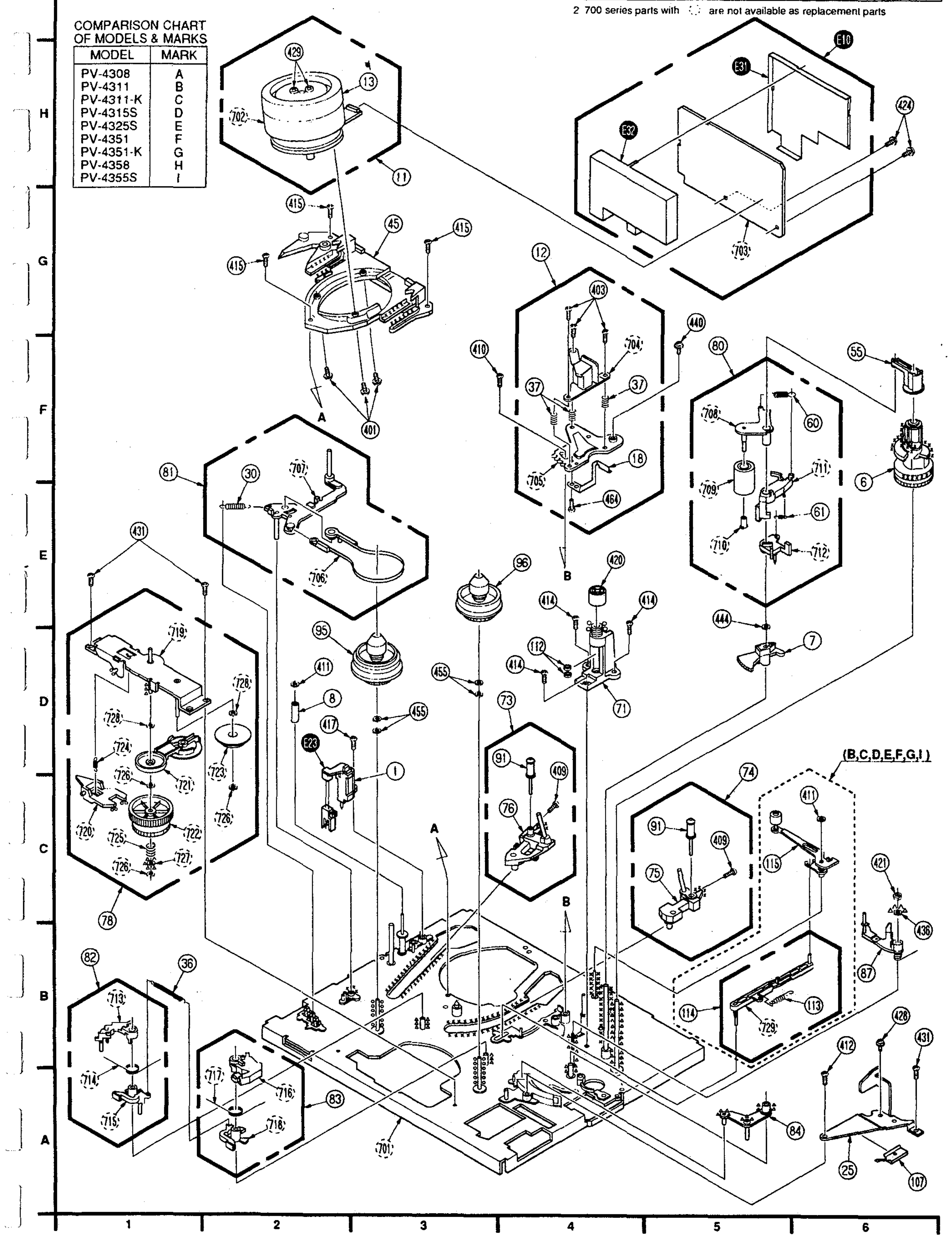
When the marked parts are replaced,apply the recommended Lubricants or adhesive for better maintenance of the unit

Mark	Kind of Lubricant	Availability	Part Number
XXX	Molytone Grease	Available From Factory	MOR265
OOO	Spindle Oil	Purchase From Local Supplier	- - - - -
ΔΔΔ	Grease	Available From Factory	VFKS0081

2 700 series parts with ⁚⁚ are not available as replacement parts

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-4308	A
PV-4311	B
PV-4311-K	C
PV-4315S	D
PV-4325S	E
PV-4351	F
PV-4351-K	G
PV-4358	H
PV-4355S	I

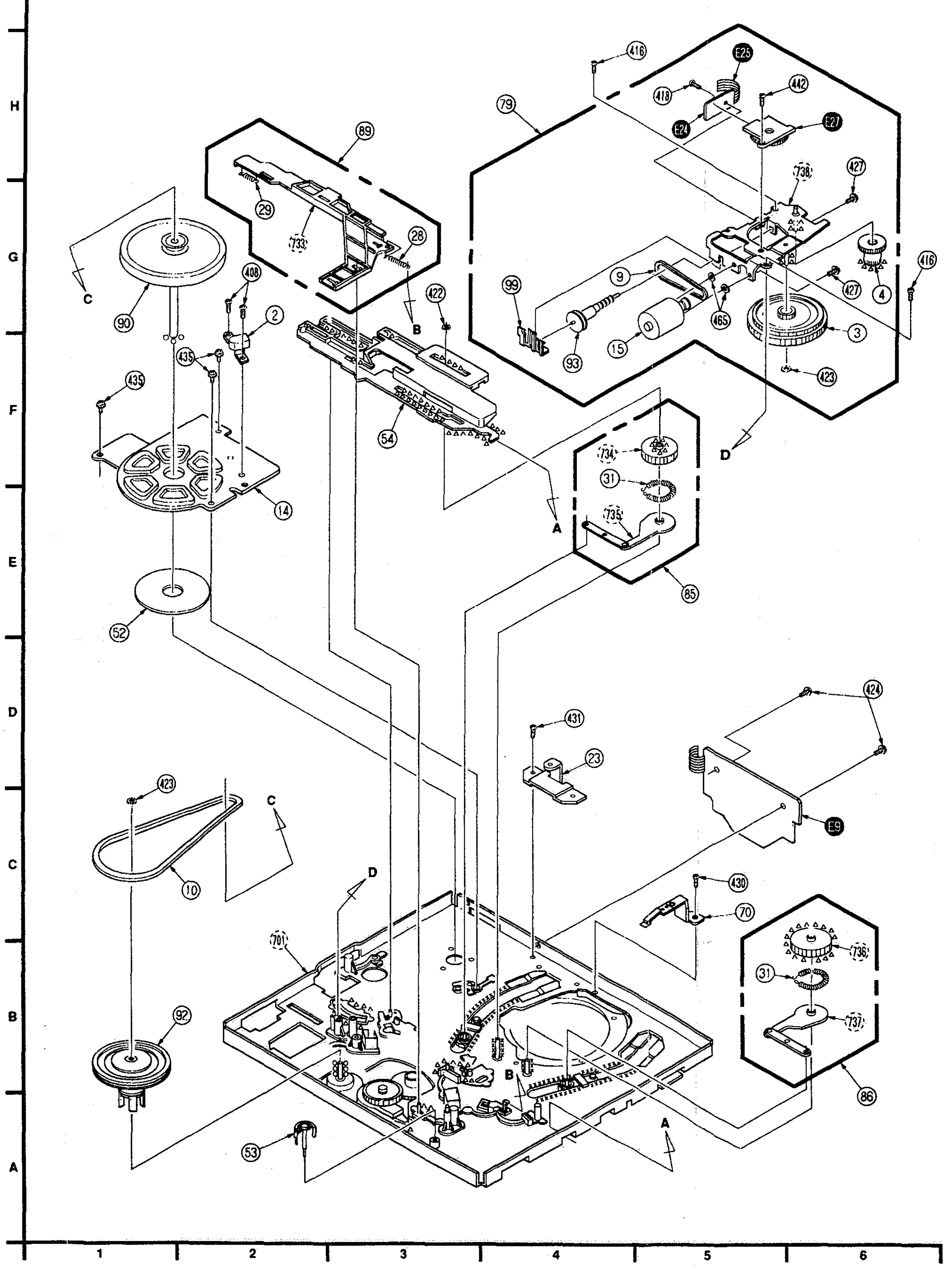

H
G
F
E
D
C
B
A
1
2
3
4
5
6
429
13
702
11
415
45
415
415
401
A
E10
E31
E32
424
703
12
403
704
37
37
18
705
464
410
440
80
708
60
709
711
61
710
712
55
6
81
30
707
706
431
719
728
728
724
726
721
723
720
725
722
726
727
726
78
95
411
8
417
455
E23
1
96
420
414
414
112
414
71
444
7
455
73
91
409
76
A
B
74
91
409
75
411
115
(B,C,D,E,F,G,I)
421
438
87
114
113
729
82
713
714
715
36
717
716
718
83
701
84
412
428
431
25
107

❷ Moving Mechanism Section

LUBRICATION POINTS

When the marked parts are replaced,apply the recommended Lubricants or adhesive for better maintenance of the unit.

Mark	Kind of Lubricant	Availability	Part Number
XXX	Molytone Grease	Available From Factory	MOR265
OOO	Spindle Oil	Purchase From Local Supplier	- - - - - -
ΔΔΔ	Grease	Available From Factory	VFKS0081

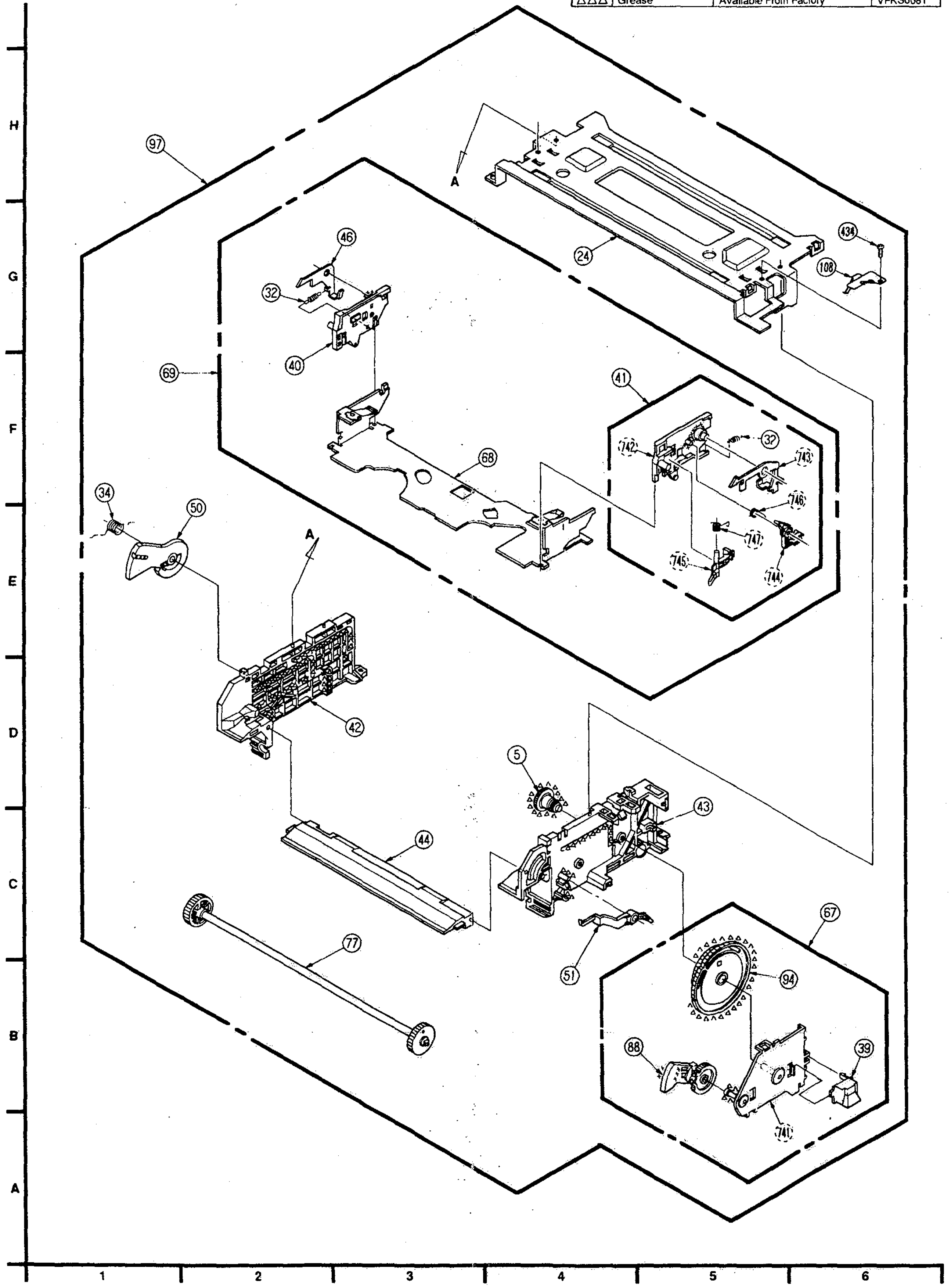

H
G
F
E
D
C
B
A
1
2
3
4
5
6
416
E25
418
442
E24
E27
79
89
29
733
28
738
427
99
9
427
4
416
465
15
93
3
423
90
C
408
2
422
435
435
B
54
14
734
31
735
85
D
A
52
424
431
23
E9
423
C
10
D
701
430
70
736
31
737
86
92
53
B
A

❸ Cassette Up Mechanism Section

LUBRICATION POINTS

When the marked parts are replaced,apply the recommended Lubricants or adhesive for better maintenance of the unit

Mark	Kind of Lubricant	Availability	Part Number
×××	Molytone Grease	Available From Factory	MOR265
○○○	Spindle Oil	Purchase From Local Supplier	-
△△△	Grease	Available From Factory	VFKS0081

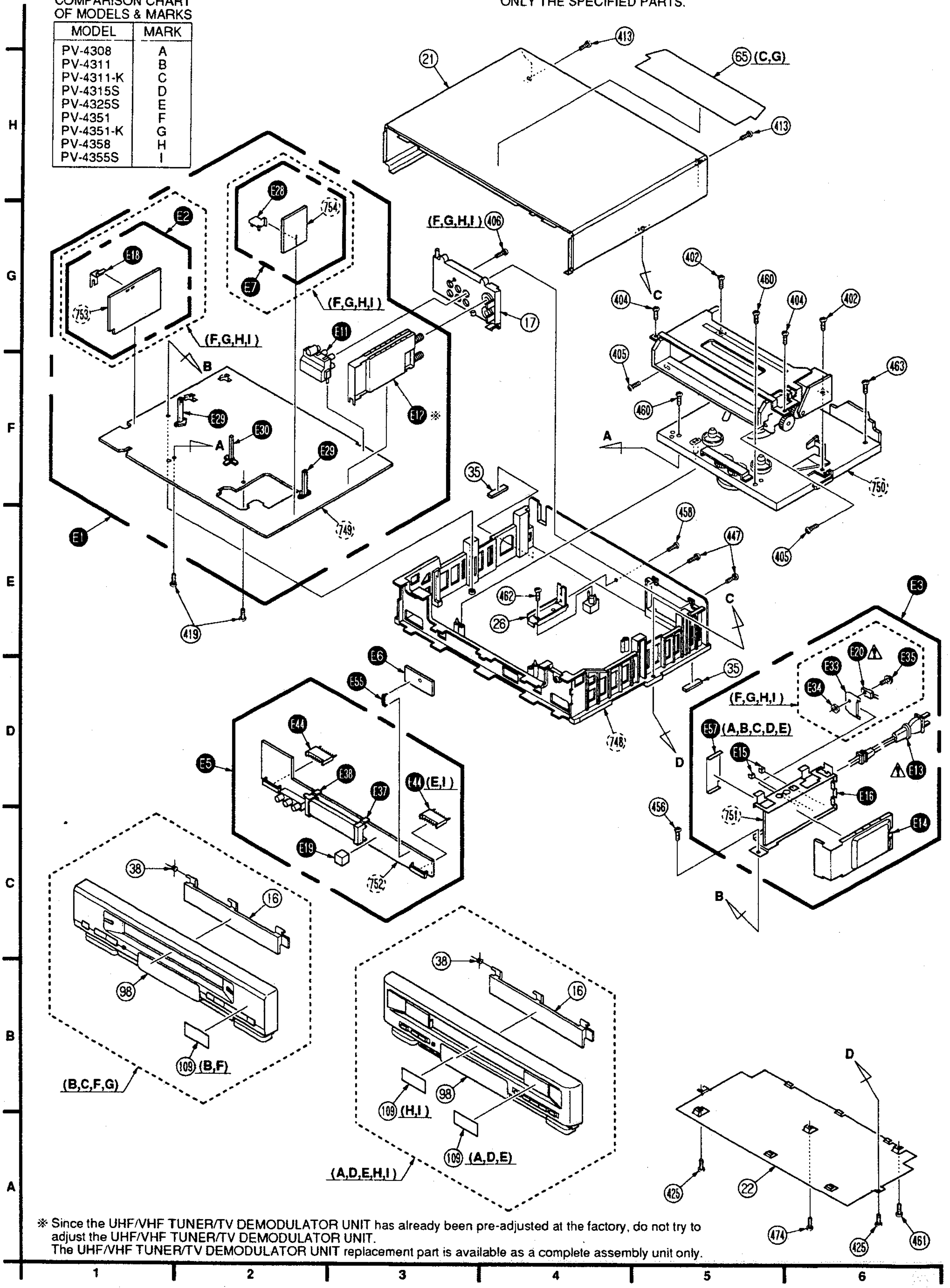

H
G
F
E
D
C
B
A
1
2
3
4
5
6
97
24
434
108
46
32
40
69
41
742
32
743
746
747
745
744
68
34
50
A
A
42
5
43
44
77
51
67
94
88
39
741

❹ Chassis Frame and Casing Parts Section

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

COMPARISON CHART OF MODELS & MARKS

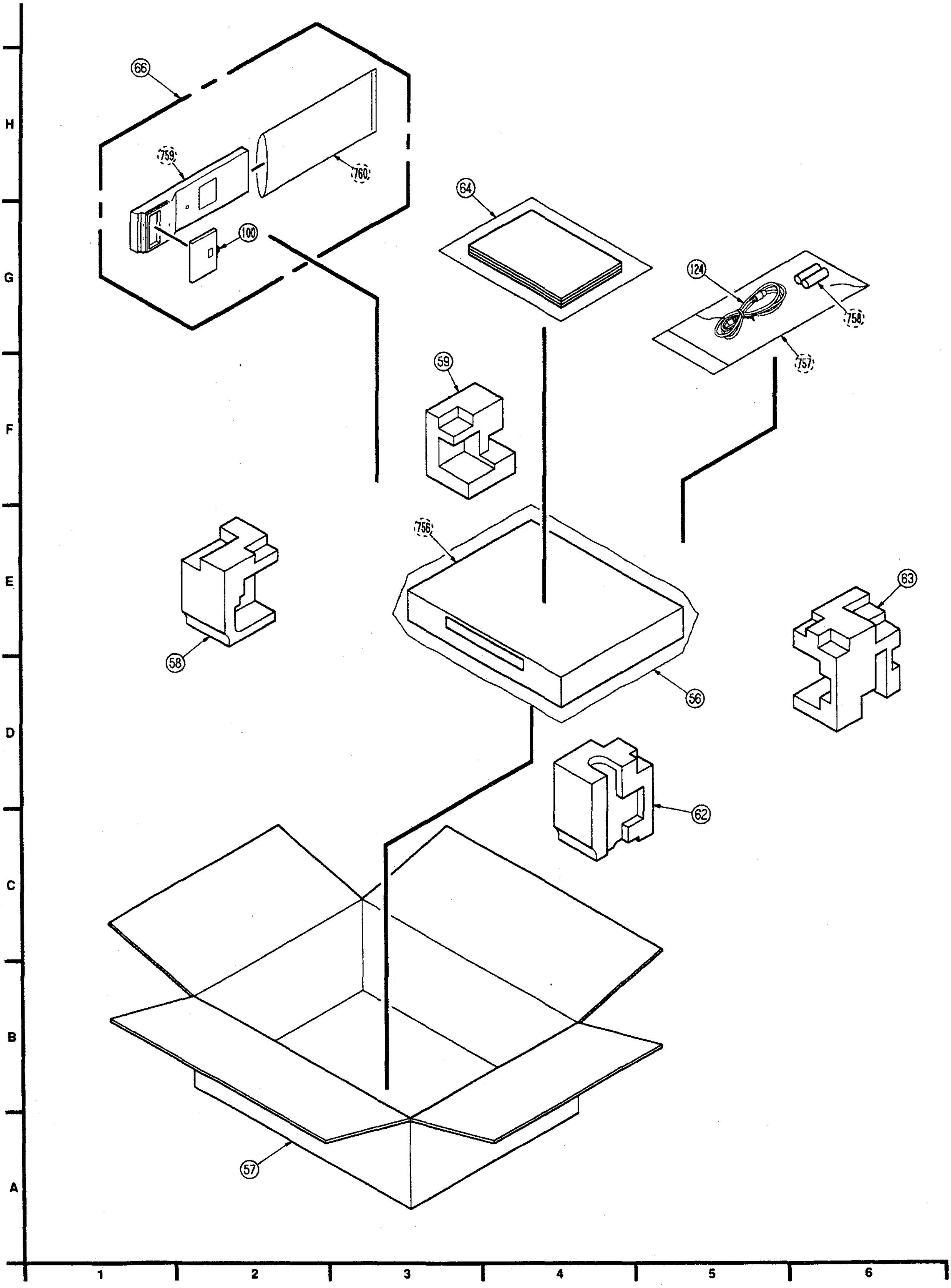
MODEL	MARK
PV-4308	A
PV-4311	B
PV-4311-K	C
PV-4315S	D
PV-4325S	E
PV-4351	F
PV-4351-K	G
PV-4358	H
PV-4355S	I



413
65 (C,G)
21
413
(F,G,H,I) 406
17
E28
754
E2
E18
E7
753
(F,G,H,I)
(F,G,H,I)
E11
E12 ※
B
E29
E30
A
E29
749
E1
419
402
460
404
402
C
404
405
463
460
A
750
35
458
447
405
462
26
C
E3
748
E6
E55
35
E20 ⚠
E33
E35
E34
(F,G,H,I)
E57 (A,B,C,D,E)
E15
⚠ E13
E16
751
E14
456
D
B
E5
E44
E38
E37
E40 (E,I)
E19
752
38
16
98
109 (B,F)
(B,C,F,G)
38
16
98
109 (H,I)
109 (A,D,E)
(A,D,E,H,I)
D
22
425
474
425
461
H
G
F
E
D
C
B
A
1
2
3
4
5
6

※ Since the UHF/VHF TUNER/TV DEMODULATOR UNIT has already been pre-adjusted at the factory, do not try to adjust the UHF/VHF TUNER/TV DEMODULATOR UNIT.
The UHF/VHF TUNER/TV DEMODULATOR UNIT replacement part is available as a complete assembly unit only.

❺ Packing Parts and Accessories Section


(66)
(759)
(760)
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(757)
(59)
(756)
(58)
(56)
(63)
(62)
(57)
H
G
F
E
D
C
B
A
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5
6

VI. REPLACEMENT PARTS LIST

1. MECHANICAL REPLACEMENT PARTS LIST

USE ONLY ORIGINAL VIDEO REPLACEMENT PARTS : To maintain original FUNCTION and RELIABILITY of repaired units, use only ORIGINAL REPLACEMENT PARTS which are listed with their part numbers in the parts list section of the Service Manual.

Note :

1. Be sure to make your orders of replacement parts according to this list.

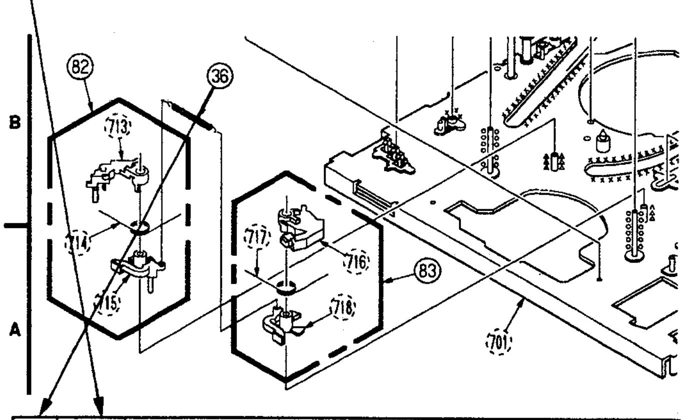
COMPARISON CHART OF MODELS & MARKS

MODEL	MARK	MODEL	MARK	MODEL	MARK
PV-4308	A	PV-4311	B	PV-4311-K	C
PV-4315S	D	PV-4325S	E	PV-4351	F
PV-4351-K	G	PV-4358	H	PV-4355S	I

<The complate Exploded Views are shown in this manual.>

V. EXPLODED VIEWS

❶ Transport Section



Item No.	Drawing No.	Description	Pcs/ Set	Part No.	Remark
		MECHANISM PARTS ON CHASSIS			
1	1	FE HEAD	1	VBSS0026	
2	2	FG HEAD	1	VBKS0024	
3	2	CAM GEAR	1	VDGS0288	
4	2	LINK GEAR	1	VDGS0289	
5	3	WORM WHEEL	1	VDGS0293	
6	1	PINCH CAM	1	VDGS0294	
7	1	P5 SECTOR GEAR	1	VDGS0296	
8	1	P1 ROLLER	1	VDPS0210	
9	2	LOADING MOTOR BELT	1	VDVS0069	
10	2	CAPSTAN BELT	1	VDVS0070	
11		CYLINDER UNIT			
	1	(A, B, C, D, E)	1	VEGS0348	
	1	(F, G, H, I)	1	VEGS0363	
12	1	A/C HEAD UNIT	1	VEHS0521	
13		UPPER CYLINDER UNIT			
	1	(A, B, C, D, E)	1	VEHS0524	
	1	(F, G, H, I)	1	VEHS0528	
14	2	CAPSTAN STATOR UNIT	1	VEMS0237	
15	2	LOADING MOTOR UNIT	1	VEMS0242	
16		CASSETTE DOOR			
	4	(A, H)	1	VGPS2872	
	4	(D, E, I)	1	VGPS2841	
		CASSETTE DOOR UNIT			
	4	(B, C, F, G)	1	VYPS5778	
17		REAR PANEL			
	4	(A, B, C, D, E)	1	VGPS2790	
	4	(F, G, H, I)	1	VGPS2791	
18	1	GROUNDING PLATE	1	VMBS0962	
21		TOP COVER			
	4	(A, H)	1	VKMS2098	
	4	(B, C, F, G)	1	VKMS2054	
	4	(D, E, I)	1	VKMS2072	
22		BOTTOM PANEL			
	4	(A, B, C, D, E)	1	VKUS0261	
	4	(F, G, H, I)	1	VKUS0262	

Item No.	Drawing No.	Description	Pcs/ Set	Part No.	Remark
23	2	P.C.B. BRACKET	1	VMAS1844	
24	3	TOP PLATE	1	VMAS2040	
25	1	OPENER ANGLE	1	VMAS1854	
26	4	CHASSIS PLATE	1	VMAS2064	
28	2	ROD RETURN SPRING	1	VMBS0895	
29	2	RELEASE PIECE SPRING	1	VMBS0896	
30	1	TENSION SPRING	1	VMBS0898	
31	2	LOADING SPRING	2	VMBS0899	
32	3	SET LEVER SPRING	2	VMBS0901	
34	3	WIPER SPRING -L	1	VMBS0906	
35	4	RUBBER FOOT	2	VKAS0019	
36	1	MAIN BRAKE SPRING	1	VMBS0910	
37	1	ADJUST SPRING	3	VMBS0915	
38	4	CASSETTE DOOR SPRING	1	VMBS1056	
39	3	SENSOR COVER	1	VMDS0784	
40	3	HOLDER GUIDE -L	1	VMDS0719	
41	3	CASSETTE HOLDER GUIDE R UNIT	1	VXAS1545	
42	3	SIDE PLATE -L	1	VMDS0722	
43	3	SIDE PLATE -R	1	VMDS0723	
44	3	CASSETTE GUIDE	1	VMDS0724	
45	1	CYLINDER BASE	1	VMDS0925	
46	3	SET LEVER -L	1	VMLS0785	
50	3	WIPER ARM -L	1	VMLS0790	
51	3	CASSETTE LEVER	1	VMLS0840	
52	2	SUB PLATE	1	VMAS1470	
53	2	CASSETTE DOWN DETECT PIECE	1	VMMS0077	
54	2	MAIN ROD	1	VMMS0078	
55	1	PINCH CAM CAP	1	VMXS0782	
56	5	POLYETHYLENE SHEET	1	VPFS0095	
57		PACKING CASE			
	5	(A)	1	VPGS3336	
	5	(B)	1	VPGS3362	
	5	(C)	1	VPGS3365	
	5	(D)	1	VPGS3332	
	5	(E)	1	VPGS3333	
	5	(F)	1	VPGS3327	
	5	(G)	1	VPGS3366	
	5	(H)	1	VPGS3337	
	5	(I)	1	VPGS3334	
58	5	LEFT CUSHION -FRONT	1	VPNS0532	
59	5	LEFT CUSHION -REAR	1	VPNS0533	
60	1	PRESSURE ROLLER SPRING	1	VMBS0702	
61	1	PRESSURE ROLLER ARM SPRING	1	VMBS0590	
62	5	RIGHT CUSHION -FRONT	1	VPNS0534	
63	5	RIGHT CUSHION -REAR	1	VPNS0535	
64		FAN BAG			
	5	(A)	1	VQFS2885	
	5	(B)	1	VQFS2857	
	5	(C)	1	VQFS2903	
	5	(D)	1	VQFS2881	
	5	(E)	1	VQFS2882	
	5	(F)	1	VQFS2848	
	5	(G)	1	VQFS2902	
	5	(H)	1	VQFS2886	
	5	(I)	1	VQFS2883	
65		STICKER -TOP			
	4	(C)	1	VQLS3890	
	4	(G)	1	VQLS3892	
66		IR WIRELESS TRANSMITTER UNIT			
	5	(A, H)	1	VSQS1241	
	5	(B, C, D, F, G)	1	VSQS1250	
	5	(E)	1	VSQS1251	
	5	(I)	1	VSQS1252	
67	3	SUB PLATE ASS'Y	1	VXAS1566	
68	3	CASSETTE HOLDER UNIT	1	VXAS1532	
69	3	CASSETTE HOLDER ASS'Y	1	VXAS1534	
70	2	EARTH PLATE UNIT	1	VXBS0042	
71	1	CAPSTAN HOLDER UNIT	1	VXDS0128	
73	1	LOADING POST S ASS'Y	1	VXDS0129	
74	1	LOADING POST T ASS'Y	1	VXDS0130	
75	1	LOADING POST BASE T UNIT	1	VXDS0133	
76	1	LOADING POST BASE S UNIT	1	VXDS0134	
77	3	MAIN SHAFT UNIT	1	VXJS0052	
78	1	CENTER BLOCK UNIT	1	VXKS0674	
79	2	MOTOR BLOCK ASS'Y	1	VXKS0676	

Item No.	Drawing No.	Description	Pcs/ Set	Part No.	Remark
80	1	PRESSURE ROLLER ARM UNIT	1	VXLS0836	
81	1	TENSION ARM UNIT	1	VXLS0838	
82	1	BRAKE S UNIT	1	VXLS0843	
83	1	BRAKE T UNIT	1	VXLS0846	
84	1	CAM FOLLOWER ARM UNIT	1	VXLS0848	
85	2	LOADING ARM T UNIT	1	VXLS0850	
86	2	LOADING ARM S UNIT	1	VXLS0852	
87	1	P5 ARM UNIT	1	VXLS0853	
88	3	WIPER ARM R UNIT	1	VXLS0856	
89	2	SECONDARY ROD UNIT	1	VXLS0917	
90	2	CAPSTAN ROTOR UNIT	1	VXPS0301	
91	1	ROLLER POST UNIT	2	VXPS0302	
92	2	CLUTCH UNIT	1	VXPS0303	
93	2	WORM UNIT	1	VXPS0309	
94	3	GENEVA GEAR UNIT	1	VXPS0310	
95	1	SUPPLY REEL TABLE UNIT	1	VXRS0061	
96	1	TAKEUP REEL TABLE UNIT	1	VXRS0062	
97	3	CASSETTE UP ASS'Y	1	VXYS0794	
98		FRONT PANEL UNIT			
	4	(A)	1	VYPS5898	
	4	(B)	1	VYPS5874	
	4	(C)	1	VYPS5877	
	4	(D)	1	VYPS5834	
	4	(E)	1	VYPS5897	
	4	(F)	1	VYPS5873	
	4	(G)	1	VYPS5878	
	4	(H)	1	VYPS5901	
	4	(I)	1	VYPS5900	
99	2	WORM SHAFT SUPPORT	1	VDBS0247	
100	5	BATTERY COVER	1	VKFS1073	
107	1	GROUNDING SPRING	1	VMBS0959	
108	3	GROUNDING PLATE	1	VMCS0061	
109		STICKER -FRONT			
	4	(A, D, H)	1	VQLS3794	
	4	(B, E, F, I)	1	VQLS3809	
112	1	DUST SEAL	2	VMXS0511	
113		CONNECT LEVER SPRING			
	1	(B, C, D, E, F, G, I)	1	VMBS0914	
114		HEAD CLEANER LINK LEVER UNIT			
	1	(B, C, D, E, F, G, I)	1	VXLS0839	
115		HEAD CLEANER ARM UNIT			
	1	(B, C, D, E, F, G, I)	1	VXLS0841	
124	5	VHF CONNECTING CABLE	1	VJAS0155	
		SCREWS & WASHERS			
401	1	SCREW WITH WASHER	3	VHDS0356	
402	4	TAPPING SCREW 3X8	2	XTV3+8FR	
403	1	ADJUST SCREW	3	VHDS0398	
404	4	SCREW 3X10	2	VHDS0286	
405	4	SCREW	2	VHDS0399	
406		SCREW 3X12			
	4	(F, G, H, I)	1	VHDS0319	
408	2	SCREW 2.6X10	2	VHDS0402	
409	1	LOCK SCREW	2	VHDS0236	
410	1	SCREW 2.6X6	1	VHDS0403	
411		CUT WASHER			
	1	(A, H)	1	VMXS0664 ※	
	1	(B, C, D, E, F, G, I)	2	VMXS0664 ※	
412	1	SCREW 2X8	1	XYM2+S8	
413	4	SCREW 4X13	2	VHDS0293	
414	1	SCREW 2.6X5	3	XSN26+5	
415	1	SCREW 3X6	3	XSN3+6	
416	2	TAPPING SCREW 2.6X10	2	XTN26+10G	
417	1	SCREW 2.6X12	1	XTN26+12G	
418	2	TAPPING SCREW 2X5	1	XTV2+5F	
419	4	TAPPING SCREW 2.6X8	2	XTV26+8GR	
420	1	THRUST SCREW UNIT	1	VXDS0031	
421	1	M3 NUT	1	VHNS0015	
422	2	POLY SLIDER WASHER 2	1	XWGV2D5G	
423	2	CUT WASHER	2	VMXS0336 ※	
424	1, 2	SCREW WITH WASHER 2.6X6	4	XYC26+CF6J	
425	4	TAPPING SCREW 3X12	2	XTB3+12A	
427	2	SCREW WITH WASHER 3X4	2	XYN3+C4	
428	1	SCREW WITH WASHER 2.6X10	1	XYA26+SF10J	

※ THIS CUT WASHER IS NOT REUSABLE. IF REMOVED, INSTALL A NEW ONE.

Item No.	Drawing No.	Description	Pcs/ Set	Part No.	Remark
429		SCREW 2.6X7.5			
	1	(A, B, C, D, E)	2	VHDS0423	
		SCREW 3X9.5			
	1	(F, G, H, I)	2	VHDS0226	
430	2	TAPPING SCREW 2.6X6	1	XTV26+6FFZJ	
431	1, 2	TAPPING SCREW 2.6X6	4	XTV26+6FJ	
434	3	TAPPING SCREW 2.6X8	1	XTB26+8G	
435	2	TAPPING SCREW WITH WASHER	3	XYEV0004J	
436	1	POLY WASHER	1	XWE3VW	
440	1	SCREW WITH WASHER 2.6X6	1	XYN26+F6FZ	
442	2	TAPPING SCREW 2X5	1	XTV2+5GFZ	
444	1	CUT WASHER	1	VMXS0722 ※	
447	4	SCREW 3X12	2	VHDS0310	
455	1	POLY SLIDER WASHER 3	4	XWGV3Z54G	
456	4	SCREW 3X10	1	VHDS0455	
458	4	TAPPING SCREW 3X8	1	XTV3+8F	
460	4	TAPPING SCREW 4X12	2	XTN4+12A	
461	4	SCREW 3X10	1	VHDS0460	
462	4	SCREW 4X15	1	XTN4+15AR	
463	4	SCREW	1	VHDS0416	
464	1	TAPPING SCREW 1.6X3	1	XQN16+CF3	
465	2	POLY SLIDER WASHER	2	XWGV26A5	
474	4	TAPPING SCREW 2.6X8	1	VHDS0462	
		SERVICING FIXTURES & TOOLS			
		VHS ALIGNMENT TAPE		VFMS0001H6	
		H-POSITION ADJ. SCREWDRIVER		VFKS0080	
		POST ADJ. SCREWDRIVER		VFK0329	
		POST ADJ. PLATE		VFKS0010	
		REEL TABLE HEIGHT FIXTURE		VFKS0009	
		HEAD CLEANING STICK		VFK27	
		MOLYTONE GREASE		MOR265	
		LOCK SCREW WRENCH		VFKS0032	
		GREASE		VFKS0081	

ITEM NUMBERS OF PARTS NOT SUPPLIED

Item No.	Drawing No.	Item No.	Drawing No.	Item No.	Drawing No.	Item No.	Drawing No.	Item No.	Drawing No.
701	1, 2	702	1	703	1	704	1	705	1
706	1	707	1	708	1	709	1	710	1
711	1	712	1	713	1	714	1	715	1
716	1	717	1	718	1	719	1	720	1
721	1	722	1	723	1	724	1	725	1
726	1	727	1	728	1	729	1	733	2
734	2	735	2	736	2	737	2	738	2
741	3	742	3	743	3	744	3	745	3
746	3	747	3	748	4	749	4	750	4
751	4	752	4	753	4	754	4	756	5
757	5	758	5	759	5	760	5		

UNUSED ITEM NUMBERS

19, 20, 27, 33, 47, 48, 49, 72, 101, 102, 103, 104, 105, 106, 110, 111, 116, 117, 118, 119, 120, 121, 122, 123, 407, 426, 432, 433, 437, 438, 439, 441, 443, 445, 446, 448, 449, 450, 451, 452, 453, 454, 457, 459, 466, 467, 468, 469, 470, 471, 472, 473

2. ELECTRICAL REPLACEMENT PARTS LIST

USE ONLY ORIGINAL VIDEO REPLACEMENT PARTS : To maintain original FUNCTION and RELIABILITY of repaired units, use only ORIGINAL REPLACEMENT PARTS which are listed with their part numbers in the parts list section of the Service Manual.

Special Note :

All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "Electrostatically Sensitive(ES) Devices" section of this service manual.

Note :

1. Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
   Components identified by the sign ⚠ have special characteristics important for safety.
   When replacing any of these components, use only the specified parts.
3. Unless otherwise specified ;
   All resistors are in OHMS(Ω), ¼W, ± 5 %, carbon, K= 1,000 Ω, M= 1,000K Ω.
   All capacitors are in MICROFARADS(μF), P= μμf, ± 10 %.
   All coils are in MICROHENRIES(μH), M= 10^3 μH, ± 10 %.
4. C.B.A. : Circuit Board Assembly.
5. P.C.B. : Printed Circuit Board.
6. E.S.D. : Electrostatically Sensitive Devices.
7. ITEM NUMBERS WITH CAPITAL LETTER E
   Item numbers with capital letter E(Example : E1,E2,···) in the Ref. No. column are shown in the exploded views.
   The E item numbers are also printed on the same page at the top of the column.
8. The parts with "■"are assembly parts or units.
   The parts with "▲"are assembly parts or units which belong to parts with "■"right above them in the printed circuit board assembly & unit list.
9. SERVICE OF CHIP PARTS
   When servicing chip parts, please use a soldering iron of less than 30 watts.
10. List of Abbreviations for Part Names & Descriptions :
    MGF CHIP : METAL GLAZE FILM CHIP
    C CHIP : CERAMIC CHIP
    COMPLX CMP : COMPLEX COMPONENT
    W FLMPRF : WIREWOUND FLAMEPROOF

Note :

The following parts are not supplied separately. Please order and replace with the circuit board assembly instead of individual parts.

(1) Hi-Fi AUDIO C.B.A. ; VEPS04110A1
IC4201 R4212 R4213 R4219 R4220 R4221 R4226 R4263 R4264

(2) MTS/SAP C.B.A. ; VEPS0914A1, VEPS0915A1
IC9001 R9009 R9013 R9026 R9030 R9031 R9032 R9037 R9038 R9039

(3) HEAD AMP ASS'Y ; VEPS0554A1
IC3501 R3501 R3502 R3505 R3506 R3507 R3508 R3509 R3510 R3512 R3515 R3516

(4) Hi-Fi AUDIO/VIDEO HEAD AMP ASS'Y ; VEPS0555A1
IC3501 R3501 R3502 R3505 R3506 R3507 R3508 R3509 R3510 R3512 R3515 R3516

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK	MODEL	MARK	MODEL	MARK
PV-4308	A	PV-4311	B	PV-4311-K	C
PV-4315S	D	PV-4325S	E	PV-4351	F
PV-4351-K	G	PV-4358	H	PV-4355S	I

(E1, E2, E3, E7)

Ref. No.		Part No.	Part Name & Description	Pcs/ Set	Remarks
			PRINTED CIRCUIT BOARD ASSEMBLY		
E1	■	VEPS02197Y1	MAIN C. B. A.	1	E. S. D. (RTL)
		(A, B)			
E1	■	VEPS02197Q1	MAIN C. B. A.		E. S. D. (RTL)
		(C)			
E1	■	VEPS02197L1	MAIN C. B. A.		E. S. D. (RTL)
		(D)			
E1	■	VEPS02200B1	MAIN C. B. A.		E. S. D. (RTL)
		(E)			
E1	■	VEPS02198A1	MAIN C. B. A.		E. S. D. (RTL)
		(F)			
E1	■	VEPS02198H1	MAIN C. B. A.		E. S. D. (RTL)
		(G)			
E1	■	VEPS02198E1	MAIN C. B. A.		E. S. D. (RTL)
		(H)			
E1	■	VEPS02201C1	MAIN C. B. A		E. S. D. (RTL)
		(I)			
E2	▲	VEPS04110A1	*Hi-Fi AUDIO C. B. A.*	1	
		(F, G, H, I)			
E7	▲	VEPS0915A1	MTS/SAP C. B. A.	1	
		(F)			
E7	▲	VEPS0914A1	MTS/SAP C. B. A.		
		(G, H, I)			
E3	■	VEPS01031B2	POWER SUPPLY ASS'Y	1	(RTL)
		(A, B, C, D, E)			
E3	■	VEPS01031D2	POWER SUPPLY ASS'Y		(RTL)
		(F, G, H, I)			

(E5, E6, E9, E10, E29)

Ref. No.		Part No.	Part Name & Description	Pcs/ Set	Remarks
E5	■	VEPS07528A1	OPERATION I C. B. A.	1	E. S. D. (RTL)
		(A)			
E5	■	VEPS07515A1	OPERATION I C. B. A.		E. S. D. (RTL)
		(B, C)			
E5	■	VEPS07528C1	OPERATION I C. B. A.		E. S. D. (RTL)
		(D)			
E5	■	VEPS07538A1	TIMRE/OPERATION I C. B. A.		E. S. D. (RTL)
		(E)			
E5	■	VEPS07515B1	OPERATION I C. B. A.		E. S. D. (RTL)
		(F, G)			
E5	■	VEPS07528B1	OPERATION I C. B. A.		E. S. D. (RTL)
		(H)			
E5	■	VEPS07530B1	TIMER/OPERATION I C. B. A.		E. S. D. (RTL)
		(I)			
E6	■	VEPS07535C1	TIMER/OPERATION II C. B. A.	1	(RTL)
		(A, D, E, H, I)			
E6	■	VEPS07521A1	OPERATION II C. B. A.		(RTL)
		(B, C, F, G)			
E9	■	VEPS02196A1	CAPSTAN MOTOR DRIVE C. B. A.	1	(RTL)
E10	■	VEPS0554A1	HEAD AMP ASS'Y	1	
		(A, B, C, D, E)			
E10	■	VEPS0555A1	Hi-Fi AUDIO/VIDEO HEAD AMP	1	
			ASS'Y		
		(F, G, H, I)			
	■		**MAIN C.B.A.**		
			(A,B,C,D)		
			INTEGRATED CIRCUITS		
IC2601		AN3813K	IC BIPOLAR LINEAR CYL. DRIVE	1	
IC3001		TA8843AFA	IC BIPOLAR LINEAR LUMA/CHROMA	1	
IC3221		MN3858S	IC MOS LOGIC 1H CCD DELAY	1	E. S. D.
IC3301		LC7472NM8790	IC MOS LOGIC CHARACTER	1	E. S. D.
			GENERATOR		
IC3402		CD4053BCM	IC MOS LOGIC INPUT SELECT	1	E. S. D.
		(D)			
IC4001		LA7285M	IC BIPOLAR LINEAR AUDIO REC/PB	1	
IC6001		MN6750405V5M	IC MOS LOGIC SYSTEM	1	E. S. D.
			CTL/SERVO/TIMER		
		(A, B, C)			
		MN6750325V5X	IC MOS LOGIC SYSTEM		E. S. D.
			CTL/SERVO/TIMER		
		(D)			
IC6003		XRA6418N	IC BIPOLAR LINEAR LOADING	1	
			MOTOR DRIVE		
IC6004		VEKS4587	*REEL SENSOR UNIT*	1	
IC6201		AN1358S	IC BIPOLAR LINEAR OP AMP	1	
			TRANSISTORS		
Q1201	⚠	2SD1581(T)		1	
	⚠	OR 2SD2159(T)			
Q1202		2SC2412KR	CHIP	1	
Q3004		2SB709(Q)	CHIP	1	
Q3005		2SD601(Q)	CHIP	1	
Q3007		IMX1	COMPLEX COMPONENT SI NPN CHIP	1	
Q3009		2SB710(Q)	CHIP	1	
Q3010		2SB709(Q)	CHIP	1	
Q3101		IMX1	COMPLEX COMPONENT SI NPN CHIP	1	
Q3201		2SB709(Q)	CHIP	1	
Q4101		2SC2412KR	CHIP	1	
Q6001(E29)		VEKS4588	PHOTO SENSOR UNIT	1	
Q6002(E29)		VEKS4588	PHOTO SENSOR UNIT	1	
Q6003		2SC2412KR	CHIP	1	
Q6004		2SA1037KR	CHIP	1	
Q6005		UN211L	CHIP	1	
Q6006		2SC2412KR	CHIP	1	
Q6007		UN2212	CHIP	1	
Q6008		2SA1037KR	CHIP	1	
Q6009		UN2213	CHIP	1	
Q6201		2SA1037KR	CHIP	1	
Q7001		2SA1618(Y)	CHIP	1	
			DIODES		
D1201		MA4100N	ZENER 10V	1	
D1203, 1204		WG713A		2	
D3002		WG713A		1	
D3005		04AZ9.1ZTPA7	ZENER 9.1V	1	

(E30)

Ref. No.		Part No.	Part Name & Description	Pcs/ Set	Remarks
D3006		04AZ13ZTPA7	ZENER 13V	1	
D3007, 3008		04AZ4.7ZTPA7	ZENER 4.7V	2	
D3101-3104		WG713A		4	
D3401, 3402		04AZ4.7ZTPA7	ZENER 4.7V	2	
		(D)			
D6001(E30)		VEKS4589	SENSOR LED	1	
D6002-6005		WG713A		4	
D6007		WG713A		1	
D6008		WG713A		1	
		(D)			
D6009		WG713A		1	
D6011		WG713A		1	
D6019		WG713A		1	
D6201, 6202		WG713A		2	
D6205, 6206		WG713A		2	
D7002		MA1300-H	ZENER 30V	1	
D7004		04AZ4.7ZTPA7	ZENER 4.7V	1	
D7005		04AZ6.8ZTPA7	ZENER 6.8V	1	
D7007		04AZ6.2ZTPA7	ZENER 6.2V	1	
		(A, B, C)			
		MA4062-M	ZENER 6.2V		
		(D)			
			RESISTORS		
R1201		ERD21LLJ472	CHIP 1/8W 4.7K	1	
R1202		ERDS2TJ153	15K	1	
R1205	⚠	ERD2FCVG121T	FUSE +-2% 120	1	
R2601-2603		ERD21LLJ471	CHIP 1/8W 470	3	
R2604		ERDS2TJ1R0	1	1	
R2605		ERDS2TJ1R2	1.2	1	
R2606		ERD21LLJ561	CHIP 1/8W 560	1	
R3001		ERD21LLJ151	CHIP 1/8W 150	1	
R3002, 3003	●	ERD21LL0	CHIP 1/8W 0	2	
R3006		EVNDXAA00B13	VARIABLE 1K	1	
R3009		ERD21LLJ562	CHIP 1/8W 5.6K	1	
R3010		EVNDXAA00B53	VARIABLE 5K	1	
R3011-3013		ERD21LLJ102	CHIP 1/8W 1K	3	
R3016		EVNDXAA00B53	VARIABLE 5K	1	
R3017		ERD21LLJ123	CHIP 1/8W 12K	1	
R3018		ERD21LLJ182	CHIP 1/8W 1.8K	1	
R3019		ERD21LLJ681	CHIP 1/8W 680	1	
R3020, 3021		ERD21LLJ392	CHIP 1/8W 3.9K	2	
R3022		ERD21LLJ562	CHIP 1/8W 5.6K	1	
R3023		ERD21LLJ112	CHIP 1/8W 1.1K	1	
R3024		EVNDXAA00B24	VARIABLE 20K	1	
R3027		ERD21LLJ102	CHIP 1/8W 1K	1	
R3029		ERD21LLJ102	CHIP 1/8W 1K	1	
R3032		ERD21LLJ122	CHIP 1/8W 1.2K	1	
R3033		ERD21LLJ183	CHIP 1/8W 18K	1	
R3034		ERD21LLJ472	CHIP 1/8W 4.7K	1	
R3036		ERD21LLJ122	CHIP 1/8W 1.2K	1	
R3037		ERD21LLJ564	CHIP 1/8W 560K	1	
R3038		ERD21LLJ394	CHIP 1/8W 390K	1	
R3039		EVNDXAA00B14	VARIABLE 10K	1	
R3040		ERD21LLJ822	CHIP 1/8W 8.2K	1	
R3044		ERD21LLJ273	CHIP 1/8W 27K	1	
R3045		ERD21LLJ103	CHIP 1/8W 10K	1	
R3046		ERD21LLJ681	CHIP 1/8W 680	1	
R3047		ERD21LLJ561	CHIP 1/8W 560	1	
R3048		ERD21LLJ102	CHIP 1/8W 1K	1	
R3049		ERD21LLJ821	CHIP 1/8W 820	1	
R3050		ERD21LLJ564	CHIP 1/8W 560K	1	
R3051		ERD21LLJ273	CHIP 1/8W 27K	1	
R3052		ERD21LLJ821	CHIP 1/8W 820	1	
R3055		ERD21LLJ821	CHIP 1/8W 820	1	
R3056		ERD21LLJ271	CHIP 1/8W 270	1	
R3060		ERD21LLJ103	CHIP 1/8W 10K	1	
R3061		ERDS2TJ270	27	1	
R3062		ERD21LLJ122	CHIP 1/8W 1.2K	1	
R3065		ERD21LLJ681	CHIP 1/8W 680	1	
R3066		ERD21LLJ103	CHIP 1/8W 10K	1	
R3067		ERD21LLJ681	CHIP 1/8W 680	1	
R3068		ERD21LLJ332	CHIP 1/8W 3.3K	1	
R3069		ERD21LLJ562	CHIP 1/8W 5.6K	1	
R3071		ERD21LLJ561	CHIP 1/8W 560	1	
R3072		ERD21LLJ273	CHIP 1/8W 27K	1	
R3073	⚠	ERDS2TJ101	100	1	
R3074		ERD21LLJ331	CHIP 1/8W 330	1	
R3075, 3076		ERD21LLJ750	CHIP 1/8W 75	2	

● MARK : 0 OHM RESISTOR
WHEN REPLACING, A WIRE CAN BE SUBSTITUTED FOR A 0 OHM RESISTOR.

Ref. No.		Part No.	Part Name & Description	Pcs/ Set	Remarks
R3077		ERD21LLG562	CHIP +-2% 1/8W 5.6K	1	
R3078, 3079		ERD21LLG392	CHIP +-2% 1/8W 3.9K	2	
R3080		ERD21LLG562	CHIP +-2% 1/8W 5.6K	1	
R3081, 3082		ERD21LLJ273	CHIP 1/8W 27K	2	
R3101		ERD21LLJ473	CHIP 1/8W 47K	1	
R3102		ERD21LLJ681	CHIP 1/8W 680	1	
R3103		ERD21LLJ680	CHIP 1/8W 68	1	
R3104		ERD21LLJ473	CHIP 1/8W 47K	1	
R3105		ERD21LLJ103	CHIP 1/8W 10K	1	
R3106		ERD21LLJ473	CHIP 1/8W 47K	1	
R3201		ERD21LLJ271	CHIP 1/8W 270	1	
R3202		ERD21LLJ225	CHIP 1/8W 2.2M	1	
R3203		EVNDXAA00B13	VARIABLE 1K	1	
R3221		ERD21LLJ332	CHIP 1/8W 3.3K	1	
R3303-3306		ERD21LLJ222	CHIP 1/8W 2.2K	4	
R3307		ERD21LLJ473	CHIP 1/8W 47K	1	
R3406		ERD21LLJ223	CHIP 1/8W 22K	1	
		(D)			
R4003		ERD21LLJ333	CHIP 1/8W 33K	1	
R4004		ERD21LLG223	CHIP +-2% 1/8W 22K	1	
R4006		ERD21LLJ151	CHIP 1/8W 150	1	
R4007		ERD21LLJ221	CHIP 1/8W 220	1	
R4008		ERD21LLJ821	CHIP 1/8W 820	1	
R4009		ERD21LLJ681	CHIP 1/8W 680	1	
R4010		ERD21LLJ155	CHIP 1/8W 1.5M	1	
R4011		ERD21LLJ103	CHIP 1/8W 10K	1	
R4012		ERD21LLJ334	CHIP 1/8W 330K	1	
R4013		ERD21LLJ102	CHIP 1/8W 1K	1	
R4014		ERD21LLJ152	CHIP 1/8W 1.5K	1	
R4015		ERD21LLJ562	CHIP 1/8W 5.6K	1	
R4016		ERD21LLJ682	CHIP 1/8W 6.8K	1	
R4017		ERD21LLJ473	CHIP 1/8W 47K	1	
R4018		ERD21LLJ182	CHIP 1/8W 1.8K	1	
R4019		ERD21LLJ561	CHIP 1/8W 560	1	
R4020		ERD21LLJ561	CHIP 1/8W 560	1	
		(D)			
R4101		ERD21LLJ394	CHIP 1/8W 390K	1	
R4102		ERD21LLG473	CHIP +-2% 1/8W 47K	1	
R4103		ERD21LLJ153	CHIP 1/8W 15K	1	
R6003		ERD21LLJ332	CHIP 1/8W 3.3K	1	
R6004, 6005		ERD21LLJ223	CHIP 1/8W 22K	2	
R6006		ERD21LLJ103	CHIP 1/8W 10K	1	
R6007		ERD21LLJ562	CHIP 1/8W 5.6K	1	
R6008, 6009		ERD21LLJ333	CHIP 1/8W 33K	2	
R6010		ERD21LLJ153	CHIP 1/8W 15K	1	
R6011		ERD21LLJ563	CHIP 1/8W 56K	1	
R6013, 6014		ERD21LLJ102	CHIP 1/8W 1K	2	
R6015		ERD21LLJ472	CHIP 1/8W 4.7K	1	
R6016		ERD21LLJ103	CHIP 1/8W 10K	1	
R6017, 6018		ERD21LLJ102	CHIP 1/8W 1K	2	
R6019		ERD21LLJ332	CHIP 1/8W 3.3K	1	
R6020		ERDS2TJ102	1K	1	
R6021		ERDS2TJ561	560	1	
R6022		ERD21LLJ561	CHIP 1/8W 560	1	
R6024		ERDS2TJ560	56	1	
R6025		ERD21LLJ102	CHIP 1/8W 1K	1	
R6026		ERD21LLJ182	CHIP 1/8W 1.8K	1	
R6027		ERD21LLJ102	CHIP 1/8W 1K	1	
R6028		ERD21LLJ475	CHIP 1/8W 4.7M	1	
R6030		ERDS2TJ821	820	1	
R6032		ERD21LLJ473	CHIP 1/8W 47K	1	
R6035, 6036	⚠	ERG1SJ120E	METAL OXIDE 1W 12	2	
R6037-6039		ERDS2TJ471	470	3	
R6041		ERD21LLJ224	CHIP 1/8W 220K	1	
R6042, 6043		ERD21LLJ153	CHIP 1/8W 15K	2	
R6044-6058		ERD21LLJ223	CHIP 1/8W 22K	15	
R6059		ERD21LLJ473	CHIP 1/8W 47K	1	
R6060		ERD21LLJ102	CHIP 1/8W 1K	1	
R6061, 6062		ERDS2TJ223	22K	2	
R6063-6072		ERD21LLJ223	CHIP 1/8W 22K	10	
R6081, 6082		ERD21LLJ223	CHIP 1/8W 22K	2	
R6084		ERDS2TJ471	470	1	
R6085		ERD21LLJ102	CHIP 1/8W 1K	1	
R6086, 6087		ERD21LLJ154	CHIP 1/8W 150K	2	
R6088		ERD21LLJ562	CHIP 1/8W 5.6K	1	
R6089		ERD21LLJ102	CHIP 1/8W 1K	1	
R6091		ERD21LLJ822	CHIP 1/8W 8.2K	1	
R6093		ERD21LLJ332	CHIP 1/8W 3.3K	1	
R6098, 6099		ERD21LLJ223	CHIP 1/8W 22K	2	
R6100		ERD21LLJ124	CHIP 1/8W 120K	1	

Ref. No.		Part No.	Part Name & Description	Pcs/ Set	Remarks
R6201		EVNDXAA03B15	VARIABLE 100K	1	
R6202		ERD21LLJ473	CHIP 1/8W 47K	1	
R6203		ERD21LLJ392	CHIP 1/8W 3.9K	1	
R6204		ERD21LLJ222	CHIP 1/8W 2.2K	1	
R6205		ERD21LLJ394	CHIP 1/8W 390K	1	
R6206		ERD21LLJ123	CHIP 1/8W 12K	1	
R6207		ERD21LLJ823	CHIP 1/8W 82K	1	
R6208		ERD21LLJ394	CHIP 1/8W 390K	1	
R6209		ERD21LLJ124	CHIP 1/8W 120K	1	
R6210		ERD21LLJ103	CHIP 1/8W 10K	1	
R6211		ERD21LLJ223	CHIP 1/8W 22K	1	
R6212		ERD21LLJ103	CHIP 1/8W 10K	1	
R6213		ERD21LLJ472	CHIP 1/8W 4.7K	1	
R6214		ERD21LLJ154	CHIP 1/8W 150K	1	
R6215		ERD21LLJ473	CHIP 1/8W 47K	1	
R6216		ERD21LLJ224	CHIP 1/8W 220K	1	
R6217		ERD21LLJ221	CHIP 1/8W 220	1	
R6218		ERD21LLJ472	CHIP 1/8W 4.7K	1	
R6220		ERD21LLJ103	CHIP 1/8W 10K	1	
R6221		ERD21LLJ222	CHIP 1/8W 2.2K	1	
R6222		ERD21LLJ472	CHIP 1/8W 4.7K	1	
R6223		ERD21LLJ225	CHIP 1/8W 2.2M	1	
R6224		ERD21LLJ221	CHIP 1/8W 220	1	
R6225		ERD21LLJ103	CHIP 1/8W 10K	1	
R6226		ERD21LLJ102	CHIP 1/8W 1K	1	
R6227		ERD21LLJ332	CHIP 1/8W 3.3K	1	
R6228, 6229		ERD21LLJ243	CHIP 1/8W 24K	2	
R6231		ERD21LLJ472	CHIP 1/8W 4.7K	1	
R6232, 6233		ERD21LLJ103	CHIP 1/8W 10K	2	
R6234		ERD21LLJ222	CHIP 1/8W 2.2K	1	
R6235		ERD21LLJ152	CHIP 1/8W 1.5K	1	
R6238		ERD21LLJ102	CHIP 1/8W 1K	1	
R6240		ERD21LLJ272	CHIP 1/8W 2.7K	1	
R6241		ERD21LLJ102	CHIP 1/8W 1K	1	
R6242		ERD21LLJ272	CHIP 1/8W 2.7K	1	
R6243		ERD21LLJ223	CHIP 1/8W 22K	1	
R6244		ERD21LLJ472	CHIP 1/8W 4.7K	1	
R6245		ERD21LLJ102	CHIP 1/8W 1K	1	
R7001		ERD21LLJ473	CHIP 1/8W 47K	1	
R7002		ERD21LLJ271	CHIP 1/8W 270	1	
R7003, 7004		ERDS2TJ332	3.3K	2	
R7005		ERD21LLJ472	CHIP 1/8W 4.7K	1	
R7006		ERD21LLJ102	CHIP 1/8W 1K	1	
R7007		ERD21LLJ562	CHIP 1/8W 5.6K	1	
R7008		ERD21LLJ102	CHIP 1/8W 1K	1	
R7009		ERDS2TJ221	220	1	
R7012		ERDS2TJ392	3.9K	1	
R7015		ERD21LLJ562	CHIP 1/8W 5.6K	1	
			CAPACITORS		
C1201		ECEA1HKR47	ELECTROLYTIC 50V 0.47	1	
C1202		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C1204		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C2601-2603		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	3	
C2604-2607		VCYR1C104MX	CERAMIC +-20% 16V 0.1	4	
C2608, 2609		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	2	
C2610		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C2611		ECUZ1E473KBN	C CHIP 25V 0.047	1	
C2612		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C3001		ECUZ1H680JCN	C CHIP +-5% 50V 68P	1	
C3002		ECUZ1H330JCN	C CHIP +-5% 50V 33P	1	
C3005		ECUV1H272KBN	C CHIP 50V 0.0027	1	
C3010		ECUZ1H121JCN	C CHIP +-5% 50V 120P	1	
C3011		ECUZ1H331JCN	C CHIP +-5% 50V 330P	1	
C3012		ECUZ1H181JCN	C CHIP +-5% 50V 180P	1	
C3013, 3014		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	2	
C3015		ECUZ1H560JCN	C CHIP +-5% 50V 56P	1	
C3016		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C3017		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C3019		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C3020		ECEA1HKR47	ELECTROLYTIC 50V 0.47	1	
C3021		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C3022		ECUZ1H223KBN	C CHIP 50V 0.022	1	
C3023		ECEA1EK4R7	ELECTROLYTIC 25V 4.7	1	
C3025		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C3027		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C3028		ECUZ1H222KBN	C CHIP 50V 0.0022	1	
C3029		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C3030		ECEA0JK101	ELECTROLYTIC 6.3V 100	1	

Ref. No.		Part No.	Part Name & Description	Pcs/ Set	Remarks
C3031		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C3032		ECUZ1H151JCN	C CHIP +-5% 50V 150P	1	
C3033		ECEA1EK4R7	ELECTROLYTIC 25V 4.7	1	
C3034		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C3035		ECEA1EK4R7	ELECTROLYTIC 25V 4.7	1	
C3036		ECEA1HKR33	ELECTROLYTIC 50V 0.33	1	
C3037		ECEA1EK4R7	ELECTROLYTIC 25V 4.7	1	
C3038		ECUZ1C474ZFN	C CHIP +80%-20% 16V 0.47	1	
C3039		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C3040		ECEA0JK101	ELECTROLYTIC 6.3V 100	1	
C3041, 3042		ECUZ1H180JCN	C CHIP +-5% 50V 18P	2	
C3043		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C3044		ECUZ1H560JCN	C CHIP +-5% 50V 56P	1	
C3045		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C3046		ECEA0JK470	ELECTROLYTIC 6.3V 47	1	
C3047		ECUZ1H560JCN	C CHIP +-5% 50V 56P	1	
C3048		ECUZ1H181JCN	C CHIP +-5% 50V 180P	1	
C3049		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C3050		ECUZ1H680JCN	C CHIP +-5% 50V 68P	1	
C3052		ECUZ1E333KBN	C CHIP 25V 0.033	1	
C3053		ECUZ1H270JCN	C CHIP +-5% 50V 27P	1	
C3054		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C3055		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C3056		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C3057, 3058		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	2	
C3060, 3061		ECUZ1H271JCN	C CHIP +-5% 50V 270P	2	
C3062		ECUZ1E223KBN	C CHIP 25V 0.022	1	
C3064		ECUZ1H180JCN	C CHIP +-5% 50V 18P	1	
C3065		ECUZ1H271JCN	C CHIP +-5% 50V 270P	1	
C3066		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C3069		ECUZ1H150JCN	C CHIP +-5% 50V 15P	1	
C3070		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C3071		ECEA0JU471	ELECTROLYTIC 6.3V 470	1	
C3201		ECEA0JK470	ELECTROLYTIC 6.3V 47	1	
C3202		ECEA1EK4R7	ELECTROLYTIC 25V 4.7	1	
C3203		ECUZ1H560JCN	C CHIP +-5% 50V 56P	1	
C3204		ECUZ1H101JCN	C CHIP +-5% 50V 100P	1	
C3205		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C3221		ECUZ1H102KBN	C CHIP 50V 0.001	1	
C3222, 3223		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	2	
C3224		ECEA1HK2R2	ELECTROLYTIC 50V 2.2	1	
C3301		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C3302		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C3303, 3304		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	2	
C3305		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C3306		ECUZ1H100DCN	C CHIP +-0.5P 50V 10P	1	
C3307		ECUZ1H220JCN	C CHIP +-5% 50V 22P	1	
C3308		ECUZ1H090CCN	C CHIP +-0.25P 50V 9P	1	
C3309		ECUZ1H181JCN	C CHIP +-5% 50V 180P	1	
C3310		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C3311		ECEA0JK470	ELECTROLYTIC 6.3V 47	1	
C3402, 3403		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	2	
		(D)			
C4002		ECUZ1H102KBN	C CHIP 50V 0.001	1	
C4003		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4005		ECUZ1H272KBN	C CHIP 50V 0.0027	1	
C4006		ECEA1HKR47	ELECTROLYTIC 50V 0.47	1	
C4007		ECEA0JK220	ELECTROLYTIC 6.3V 22	1	
C4008		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C4009		ECUZ1H822KBN	C CHIP 50V 0.0082	1	
C4010		ECUZ1E223KBN	C CHIP 25V 0.022	1	
C4012		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C4013		ECUZ1H103KBN	C CHIP 50V 0.01	1	
C4014		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4015, 4016		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	2	
C4017		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4018		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C4019		ECEA1CK220	ELECTROLYTIC 16V 22	1	
C4102		ECHS1562JZ3	POLYESTER +-5% 100V 5600P	1	
C4103, 4104		ECUZ1H103KBN	C CHIP 50V 0.01	2	
C4106		ECEA1CK220	ELECTROLYTIC 16V 22	1	
C6003, 6004		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	2	
C6005		ECUZ1H470JCN	C CHIP +-5% 50V 47P	1	
C6006		ECUZ1H101JCN	C CHIP +-5% 50V 100P	1	
C6007		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C6010		ECEA0JU471	ELECTROLYTIC 6.3V 470	1	
C6012		ECEA0JK101	ELECTROLYTIC 6.3V 100	1	
C6015		ECUZ1H102KBN	C CHIP 50V 0.001	1	
C6201		ECEA1EK4R7	ELECTROLYTIC 25V 4.7	1	
C6202		ECUZ1H102KBN	C CHIP 50V 0.001	1	

Ref. No.		Part No.	Part Name & Description	Pcs/ Set	Remarks
C6203		ECUZ1H103KBN	C CHIP 50V 0.01	1	
C6204		ECEA0JK330	ELECTROLYTIC 6.3V 33	1	
C6205		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C6206		ECUZ1H103KBN	C CHIP 50V 0.01	1	
C6207		ECEA0JK470	ELECTROLYTIC 6.3V 47	1	
C6208		ECUZ1H470JCN	C CHIP +-5% 50V 47P	1	
C6209		ECUZ1H390JCN	C CHIP +-5% 50V 39P	1	
C6210		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C6211		ECQB1H393KF	POLYESTER 50V 0.039	1	
C6212		ECUZ1H151KN	C CHIP 50V 150P	1	
C6213		ECUZ1H182KBN	C CHIP 50V 0.0018	1	
C6214-6216		VCYR1C104MX	CERAMIC +-20% 16V 0.1	3	
		(A, B, C)			
		MCYR1C104MX	CERAMIC +-20% 16V 0.1		
		(D)			
C6217		ECUZ1H272KBN	C CHIP 50V 0.0027	1	
C6218		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C6219, 6220		ECEA1HK2R2	ELECTROLYTIC 50V 2.2	2	
C6221		ECUZ1H272KBN	C CHIP 50V 0.0027	1	
C6222		ECEA0JK220	ELECTROLYTIC 6.3V 22	1	
C6223		ECUZ1H102KBN	C CHIP 50V 0.001	1	
C6225		ECEA0JK220	ELECTROLYTIC 6.3V 22	1	
C6226		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C6227		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C6228		ECEA0JK221	ELECTROLYTIC 6.3V 220	1	
C6229		ECUZ1H472KBN	C CHIP 50V 0.0047	1	
C6230		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C7001		ECEA0JK101	ELECTROLYTIC 6.3V 100	1	
C7004, 7005		ECUZ1H103KBN	C CHIP 50V 0.01	2	
C7007		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C7008		ECA1CM221I	ELECTROLYTIC 16V 220	1	
C7010		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C7016		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
			DELAY LINE		
DL3001		VLDS0049		1	
			FILTERS		
FL3001		VLFS0209		1	
			COILS		
L3001		ELESN220KA	22	1	
L3002		ELESN680KA	68	1	
L3003		ELESN102KA	1M	1	
L3005		ELESN101KA	100	1	
L3006		ELESN220KA	22	1	
L3007		ELESN271KA	270	1	
L3008		ELESN330KA	33	1	
L3009		ELESN102KA	1M	1	
L3010		ELESN331KA	330	1	
L3011		VLQSH02R180J	+-5% 18	1	
L3012		ELESN470KA	47	1	
L3013		VLQSH02R180J	+-5% 18	1	
L3014		ELESN271KA	270	1	
L3015		ELESN391KA	390	1	
L3201		ELESN470KA	47	1	
L3261		ELESN390KA	39	1	
L3301		VLQSH02R180J	+-5% 18	1	
L3302		ELESN101KA	100	1	
L4001		VLQS0030	15M	1	
L4101		VLQS005R471K	470	1	
L7001, 7002		ELESN101KA	100	2	
			CRYSTAL OSCILLATOR		
X3001		VSXS0157		1	
X6201		VSXS0123		1	
			PIN HEADERS		
P1201		VJPS0645	9P	1	
P3001		VJPS0642	22P	1	
P4101		VJSS0644	2P	1	
P6001		VJPS0714	19P	1	
		(A, B, C)			
		VJPS0712	19P		
		(D)			

(E11, E12, E29, E30)

Ref. No.		Part No.	Part Name & Description	Pcs/ Set	Remarks
P6201		VJPS0642	22P	1	
			SWITCHES		
SW6001		VSHS0030	SAFETY TAB SWITCH	1	
SW6002		ESE105SV1	CASSETTE UP/DOWN SWITCH	1	
SW7001		VSSS0142	SELECT SWITCH	1	
			TRANSFORMER		
T4101		EI070F0180		1	
			MISCELLANEOUS		
JK3001 (E11)		VJHS0260	PIN JACK	1	
E12		VEQS0553	UHF/VHF TUNER/TV DEMODULATOR	1	
			UNIT		
	■		**MAIN C.B.A.**		
			(E)		
			INTEGRATED CIRCUITS		
IC2601		AN3813K	IC BIPOLAR LINEAR CYL. DRIVE	1	
IC3001		TA8843AFA	IC BIPOLAR LINEAR LUMA/CHROMA	1	
IC3221		MN3858S	IC MOS LOGIC 1H CCD DELAY	1	E. S. D.
IC3301		LC7472NM8790	IC MOS LOGIC CHARACTER	1	E. S. D.
			GENERATOR		
IC3402		CD4053BCM	IC MOS LOGIC INPUT SELECT	1	E. S. D.
IC4001		LA7285M	IC BIPOLAR LINEAR AUDIO REC/PB	1	
IC6001		MN6750245V5G	IC MOS LOGIC SYSTEM CTL/SERVO	1	E. S. D.
IC6003		XRA6418N	IC BIPOLAR LINEAR LOADING	1	
			MOTOR DRIVE		
IC6004		VEKS4587	REEL SENSOR UNIT	1	
IC6201		AN1358S	IC BIPOLAR LINEAR OP AMP	1	
			TRANSISTORS		
Q1201	⚠	2SD1581(T)		1	
	⚠	OR 2SD2159(T)			
Q1202		2SC2412KR	CHIP	1	
Q3004		2SB709(Q)	CHIP	1	
Q3005		2SD601(Q)	CHIP	1	
Q3007		IMX1	COMPLEX COMPONENT SI NPN CHIP	1	
Q3009		2SB710(Q)	CHIP	1	
Q3010		2SB709(Q)	CHIP	1	
Q3101		IMX1	COMPLEX COMPONENT SI NPN CHIP	1	
Q3201		2SB709(Q)	CHIP	1	
Q4101		2SC2412KR	CHIP	1	
Q6001 (E29)		VEKS4588	PHOTO SENSOR UNIT	1	
Q6002 (E29)		VEKS4588	PHOTO SENSOR UNIT	1	
Q6003		2SC2412KR	CHIP	1	
Q6004		2SA1037KR	CHIP	1	
Q6005		UN2212	CHIP	1	
Q6006		2SA1037KR	CHIP	1	
Q6007		RN4601	COMPLEX COMPONENT SI NPN/PNP	1	
			CHIP		
Q6016		2SA1037KR	CHIP	1	
Q6201		2SA1037KR	CHIP	1	
Q7001		2SA1618(Y)	CHIP	1	
Q7002		2SD601(Q)	CHIP	1	
			DIODES		
D1201		MA4100N	ZENER 10V	1	
D1202, 1203		WG713A		2	
D3002		WG713A		1	
D3005		04AZ9.1ZTPA7	ZENER 9.1V	1	
D3006		04AZ13ZTPA7	ZENER 13V	1	
D3007, 3008		04AZ4.7ZTPA7	ZENER 4.7V	2	
D3101-3104		WG713A		4	
D3401, 3402		04AZ4.7ZTPA7	ZENER 4.7V	2	
D6001 (E30)		VEKS4589	SENSOR LED	1	
D6002, 6003		WG713A		2	
D6009		WG713A		1	
D6201-6204		WG713A		4	
D7001		MA165		1	
D7002		MA1300-H	ZENER 30V	1	
D7004		04AZ4.7ZTPA7	ZENER 4.7V	1	

Ref. No.		Part No.	Part Name & Description	Pcs/ Set	Remarks
D7005		04AZ6.8ZTPA7	ZENER 6.8V	1	
D7007		04AZ6.2ZTPA7	ZENER 6.2V	1	
			RESISTORS		
R1201		ERD21LLJ472	CHIP 1/8W 4.7K	1	
R1202		ERDS2TJ153	15K	1	
R1205	⚠	ERD2FCVG121T	FUSE +-2% 120	1	
R2601-2603		ERD21LLJ471	CHIP 1/8W 470	3	
R2604		ERDS2TJ1R0	1	1	
R2605		ERDS2TJ1R2	1.2	1	
R2606		ERD21LLJ561	CHIP 1/8W 560	1	
R3001		ERD21LLJ151	CHIP 1/8W 150	1	
R3002,3003	●	ERD21LL0	CHIP 1/8W 0	2	
R3006		EVNDXAA00B13	VARIABLE 1K	1	
R3009		ERD21LLJ562	CHIP 1/8W 5.6K	1	
R3010		EVNDXAA00B53	VARIABLE 5K	1	
R3011-3013		ERD21LLJ102	CHIP 1/8W 1K	3	
R3016		EVNDXAA00B53	VARIABLE 5K	1	
R3017		ERD21LLJ123	CHIP 1/8W 12K	1	
R3018		ERD21LLJ182	CHIP 1/8W 1.8K	1	
R3019		ERD21LLJ681	CHIP 1/8W 680	1	
R3020,3021		ERD21LLJ392	CHIP 1/8W 3.9K	2	
R3022		ERD21LLJ562	CHIP 1/8W 5.6K	1	
R3023		ERD21LLJ112	CHIP 1/8W 1.1K	1	
R3024		EVNDXAA00B24	VARIABLE 20K	1	
R3027		ERD21LLJ102	CHIP 1/8W 1K	1	
R3029		ERD21LLJ102	CHIP 1/8W 1K	1	
R3032		ERD21LLJ122	CHIP 1/8W 1.2K	1	
R3033		ERD21LLJ183	CHIP 1/8W 18K	1	
R3034		ERD21LLJ472	CHIP 1/8W 4.7K	1	
R3036		ERD21LLJ122	CHIP 1/8W 1.2K	1	
R3037		ERD21LLJ564	CHIP 1/8W 560K	1	
R3038		ERD21LLJ394	CHIP 1/8W 390K	1	
R3039		EVNDXAA00B14	VARIABLE 10K	1	
R3040		ERD21LLJ822	CHIP 1/8W 8.2K	1	
R3044		ERD21LLJ273	CHIP 1/8W 27K	1	
R3045		ERD21LLJ103	CHIP 1/8W 10K	1	
R3046		ERD21LLJ681	CHIP 1/8W 680	1	
R3047		ERD21LLJ561	CHIP 1/8W 560	1	
R3048		ERD21LLJ102	CHIP 1/8W 1K	1	
R3049		ERD21LLJ821	CHIP 1/8W 820	1	
R3050		ERD21LLJ564	CHIP 1/8W 560K	1	
R3051		ERD21LLJ273	CHIP 1/8W 27K	1	
R3052		ERD21LLJ821	CHIP 1/8W 820	1	
R3055		ERD21LLJ821	CHIP 1/8W 820	1	
R3056		ERD21LLJ271	CHIP 1/8W 270	1	
R3060		ERD21LLJ103	CHIP 1/8W 10K	1	
R3061		ERDS2TJ270	27	1	
R3062		ERD21LLJ122	CHIP 1/8W 1.2K	1	
R3065		ERD21LLJ681	CHIP 1/8W 680	1	
R3066		ERD21LLJ103	CHIP 1/8W 10K	1	
R3067		ERD21LLJ681	CHIP 1/8W 680	1	
R3068		ERD21LLJ332	CHIP 1/8W 3.3K	1	
R3069		ERD21LLJ562	CHIP 1/8W 5.6K	1	
R3071		ERD21LLJ561	CHIP 1/8W 560	1	
R3072		ERD21LLJ273	CHIP 1/8W 27K	1	
R3073	⚠	ERDS2TJ101	100	1	
R3074		ERD21LLJ331	CHIP 1/8W 330	1	
R3075,3076		ERD21LLJ750	CHIP 1/8W 75	2	
R3077		ERD21LLG562	CHIP +-2% 1/8W 5.6K	1	
R3078,3079		ERD21LLG392	CHIP +-2% 1/8W 3.9K	2	
R3080		ERD21LLG562	CHIP +-2% 1/8W 5.6K	1	
R3081,3082		ERD21LLJ273	CHIP 1/8W 27K	2	
R3101		ERD21LLJ473	CHIP 1/8W 47K	1	
R3102		ERD21LLJ681	CHIP 1/8W 680	1	
R3103		ERD21LLJ680	CHIP 1/8W 68	1	
R3104		ERD21LLJ473	CHIP 1/8W 47K	1	
R3105		ERD21LLJ103	CHIP 1/8W 10K	1	
R3106		ERD21LLJ473	CHIP 1/8W 47K	1	
R3201		ERD21LLJ271	CHIP 1/8W 270	1	
R3202		ERD21LLJ225	CHIP 1/8W 2.2M	1	
R3203		EVNDXAA00B13	VARIABLE 1K	1	
R3221		ERD21LLJ332	CHIP 1/8W 3.3K	1	
R3303-3306		ERD21LLJ222	CHIP 1/8W 2.2K	4	
R3307		ERD21LLJ473	CHIP 1/8W 47K	1	
R3406		ERD21LLJ223	CHIP 1/8W 22K	1	
R4003		ERD21LLJ333	CHIP 1/8W 33K	1	
R4004		ERD21LLG223	CHIP +-2% 1/8W 22	1	
R4006		ERD21LLJ151	CHIP 1/8W 150	1	
R4007		ERD21LLJ221	CHIP 1/8W 220	1	
R4008		ERD21LLJ821	CHIP 1/8W 820	1	
R4009		ERD21LLJ681	CHIP 1/8W 680	1	
R4010		ERD21LLJ155	CHIP 1/8W 1.5M	1	
R4011		ERD21LLJ103	CHIP 1/8W 10K	1	
R4012		ERD21LLJ334	CHIP 1/8W 330K	1	
R4013		ERD21LLJ102	CHIP 1/8W 1K	1	
R4014		ERD21LLJ152	CHIP 1/8W 1.5K	1	
R4015		ERD21LLJ562	CHIP 1/8W 5.6K	1	
R4016		ERD21LLJ682	CHIP 1/8W 6.8K	1	
R4017		ERD21LLJ473	CHIP 1/8W 47K	1	
R4018		ERD21LLJ182	CHIP 1/8W 1.8K	1	
R4019,4020		ERD21LLJ561	CHIP 1/8W 560	2	
R4101		ERD21LLJ394	CHIP 1/8W 390K	1	
R4102		ERD21LLG473	CHIP +-2% 1/8W 47K	1	
R4103		ERD21LLJ153	CHIP 1/8W 15K	1	
R6002		ERD21LLJ223	CHIP 1/8W 22K	1	
R6003-6005		ERD21LLJ563	CHIP 1/8W 56K	3	
R6006-6008		ERD21LLJ102	CHIP 1/8W 1K	3	
R6009		ERD21LLJ472	CHIP 1/8W 4.7K	1	
R6010,6011		ERD21LLJ221	CHIP 1/8W 220	2	
R6012		ERD21LLJ333	CHIP 1/8W 33K	1	
R6013		ERD21LLJ332	CHIP 1/8W 3.3K	1	
R6015		ERD21LLJ332	CHIP 1/8W 3.3K	1	
R6016		ERD21LLJ333	CHIP 1/8W 33K	1	
R6017-6019		ERD21LLJ102	CHIP 1/8W 1K	3	
R6021		ERD21LLJ102	CHIP 1/8W 1K	1	
R6022,6023		ERD21LLJ221	CHIP 1/8W 220	2	
R6024		ERD21LLJ223	CHIP 1/8W 22K	1	
R6025		ERD21LLJ103	CHIP 1/8W 10K	1	
R6028		ERD21LLJ223	CHIP 1/8W 22K	1	
R6029		ERD21LLJ272	CHIP 1/8W 2.7K	1	
R6032		ERD21LLJ224	CHIP 1/8W 220K	1	
R6033,6034		ERD21LLJ153	CHIP 1/8W 15K	2	
R6035-6049		ERD21LLJ223	CHIP 1/8W 22K	15	
R6051,6052		ERD21LLJ223	CHIP 1/8W 22K	2	
R6053		ERD21LLJ102	CHIP 1/8W 1K	1	
R6054		ERD21LLJ223	CHIP 1/8W 22K	1	
R6055		ERD21LLJ102	CHIP 1/8W 1K	1	
R6056,6057		ERD21LLJ223	CHIP 1/8W 22K	2	
R6058		ERD21LLJ683	CHIP 1/8W 68K	1	
R6062		ERD21LLJ473	CHIP 1/8W 47K	1	
R6063		ERD21LLJ683	CHIP 1/8W 68K	1	
R6066		ERDS2TJ821	820	1	
R6069-6071		ERDS2TJ471	470	3	
R6072		ERD21LLJ102	CHIP 1/8W 1K	1	
R6073		ERDS2TJ560	56	1	
R6075,6076	⚠	ERG1SJ120E	METAL OXIDE 1W 12	2	
R6077		ERD21LLJ822	CHIP 1/8W 8.2K	1	
R6078		ERD21LLJ223	CHIP 1/8W 22K	1	
R6079		ERD21LLJ682	CHIP 1/8W 6.8K	1	
R6081		ERD21LLJ223	CHIP 1/8W 22K	1	
R6082		ERD21LLJ224	CHIP 1/8W 220K	1	
R6201		EVNDXAA03B15	VARIABLE 100K	1	
R6202		ERD21LLJ473	CHIP 1/8W 47K	1	
R6203		ERD21LLJ392	CHIP 1/8W 3.9K	1	
R6204		ERD21LLJ222	CHIP 1/8W 2.2K	1	
R6205		ERD21LLJ394	CHIP 1/8W 390K	1	
R6206		ERD21LLJ123	CHIP 1/8W 12K	1	
R6207		ERD21LLJ823	CHIP 1/8W 82K	1	
R6208		ERD21LLJ394	CHIP 1/8W 390K	1	
R6209		ERD21LLJ124	CHIP 1/8W 120K	1	
R6210		ERD21LLJ103	CHIP 1/8W 10K	1	
R6211		ERD21LLJ223	CHIP 1/8W 22K	1	
R6212		ERD21LLJ103	CHIP 1/8W 10K	1	
R6213		ERD21LLJ472	CHIP 1/8W 4.7K	1	
R6214		ERD21LLJ154	CHIP 1/8W 150K	1	
R6215		ERD21LLJ473	CHIP 1/8W 47K	1	
R6216		ERD21LLJ224	CHIP 1/8W 220K	1	
R6217		ERD21LLJ221	CHIP 1/8W 220	1	
R6218		ERD21LLJ472	CHIP 1/8W 4.7K	1	
R6220		ERD21LLJ103	CHIP 1/8W 10K	1	
R6221		ERD21LLJ222	CHIP 1/8W 2.2K	1	
R6222		ERD21LLJ472	CHIP 1/8W 4.7K	1	
R6223		ERD21LLJ475	CHIP 1/8W 4.7M	1	
R6224		ERD21LLJ221	CHIP 1/8W 220	1	
R6225		ERD21LLJ103	CHIP 1/8W 10K	1	
R6226		ERD21LLJ102	CHIP 1/8W 1K	1	
R6227		ERD21LLJ332	CHIP 1/8W 3.3K	1	
R6228,6229		ERD21LLJ243	CHIP 1/8W 24K	2	

● MARK : 0 OHM RESISTOR
WHEN REPLACING, A WIRE CAN BE SUBSTITUTED FOR A 0 OHM RESISTOR.

Ref. No.		Part No.	Part Name & Description	Pcs/ Set	Remarks
R6231		ERD21LLJ472	CHIP 1/8W 4.7K	1	
R6232, 6233		ERD21LLJ103	CHIP 1/8W 10K	2	
R6234		ERD21LLJ222	CHIP 1/8W 2.2K	1	
R6235		ERD21LLJ152	CHIP 1/8W 1.5K	1	
R6238		ERD21LLJ102	CHIP 1/8W 1K	1	
R6241		ERD21LLJ222	CHIP 1/8W 2.2K	1	
R7001		ERD21LLJ473	CHIP 1/8W 47K	1	
R7002		ERD21LLJ271	CHIP 1/8W 270	1	
R7003, 7004		ERDS2TJ332	3.3K	2	
R7005		ERD21LLJ472	CHIP 1/8W 4.7K	1	
R7006		ERD21LLJ102	CHIP 1/8W 1K	1	
R7007		ERD21LLJ562	CHIP 1/8W 5.6K	1	
R7008		ERD21LLJ102	CHIP 1/8W 1K	1	
R7009		ERDS2TJ221	220	1	
R7012, 7013		ERDS2TJ681	680	2	
R7015		ERD21LLJ562	CHIP 1/8W 5.6K	1	
			CAPACITORS		
C1201		ECEA1HKR47	ELECTROLYTIC 50V 0.47	1	
C1202		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C1204		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C2601-2603		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	3	
C2604-2607		VCYR1C104MX	CERAMIC +-20% 16V 0.1	4	
C2608, 2609		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	2	
C2610		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C2611		ECUZ1E473KBN	C CHIP 25V 0.047	1	
C2612		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C3001		ECUZ1H680JCN	C CHIP +-5% 50V 68P	1	
C3002		ECUZ1H330JCN	C CHIP +-5% 50V 33P	1	
C3005		ECUV1H272KBN	C CHIP 50V 0.0027	1	
C3010		ECUZ1H121JCN	C CHIP +-5% 50V 120P	1	
C3011		ECUZ1H331JCN	C CHIP +-5% 50V 330P	1	
C3012		ECUZ1H181JCN	C CHIP +-5% 50V 180P	1	
C3013, 3014		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	2	
C3015		ECUZ1H560JCN	C CHIP +-5% 50V 56P	1	
C3016		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C3017		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C3019		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C3020		ECEA1HKR47	ELECTROLYTIC 50V 0.47	1	
C3021		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C3022		ECUZ1H223KBN	C CHIP 50V 0.022	1	
C3023		ECEA1EK4R7	ELECTROLYTIC 25V 4.7	1	
C3025		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C3027		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C3028		ECUZ1H222KBN	C CHIP 50V 0.0022	1	
C3029		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C3030		ECEA0JK101	ELECTROLYTIC 6.3V 100	1	
C3031		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C3032		ECUZ1H151JCN	C CHIP +-5% 50V 150P	1	
C3033		ECEA1EK4R7	ELECTROLYTIC 25V 4.7	1	
C3034		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C3035		ECEA1EK4R7	ELECTROLYTIC 25V 4.7	1	
C3036		ECEA1HKR33	ELECTROLYTIC 50V 0.33	1	
C3037		ECEA1EK4R7	ELECTROLYTIC 25V 4.7	1	
C3038		ECUZ1C474ZFN	C CHIP +80%-20% 16V 0.47	1	
C3039		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C3040		ECEA0JK101	ELECTROLYTIC 6.3V 100	1	
C3041, 3042		ECUZ1H180JCN	C CHIP +-5% 50V 18P	2	
C3043		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C3044		ECUZ1H560JCN	C CHIP +-5% 50V 56P	1	
C3045		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C3046		ECEA0JK470	ELECTROLYTIC 6.3V 47	1	
C3047		ECUZ1H560JCN	C CHIP +-5% 50V 56P	1	
C3048		ECUZ1H181JCN	C CHIP +-5% 50V 180P	1	
C3049		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C3050		ECUZ1H680JCN	C CHIP +-5% 50V 68P	1	
C3052		ECUZ1E333KBN	C CHIP 25V 0.033	1	
C3053		ECUZ1H270JCN	C CHIP +-5% 50V 27P	1	
C3054		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C3055		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C3056		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C3057, 3058		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	2	
C3060, 3061		ECUZ1H271JCN	C CHIP +-5% 50V 270P	2	
C3062		ECUZ1E223KBN	C CHIP 25V 0.022	1	
C3064		ECUZ1H180JCN	C CHIP +-5% 50V 18P	1	
C3065		ECUZ1H271JCN	C CHIP +-5% 50V 270P	1	
C3066		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C3069		ECUZ1H150JCN	C CHIP +-5% 50V 15P	1	
C3070		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	

Ref. No.		Part No.	Part Name & Description	Pcs/ Set	Remarks
C3071		ECEA0JU471	ELECTROLYTIC 6.3V 470	1	
C3201		ECEA0JK470	ELECTROLYTIC 6.3V 47	1	
C3202		ECEA1EK4R7	ELECTROLYTIC 25V 4.7	1	
C3203		ECUZ1H560JCN	C CHIP +-5% 50V 56P	1	
C3204		ECUZ1H101JCN	C CHIP +-5% 50V 100P	1	
C3205		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C3221		ECUZ1H102KBN	C CHIP 50V 0.001	1	
C3222, 3223		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	2	
C3224		ECEA1HK2R2	ELECTROLYTIC 50V 2.2	1	
C3301		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C3302		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C3303, 3304		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	2	
C3305		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C3306		ECUZ1H100DCN	C CHIP +-0.5P 50V 10P	1	
C3307		ECUZ1H220JCN	C CHIP +-5% 50V 22P	1	
C3308		ECUZ1H090CCN	C CHIP +-0.25P 50V 9P	1	
C3309		ECUZ1H181JCN	C CHIP +-5% 50V 180P	1	
C3310		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C3311		ECEA0JK470	ELECTROLYTIC 6.3V 47	1	
C3402, 3403		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	2	
C4002		ECUZ1H102KBN	C CHIP 50V 0.001	1	
C4003		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4005		ECUZ1H272KBN	C CHIP 50V 0.0027	1	
C4006		ECEA1HKR47	ELECTROLYTIC 50V 0.47	1	
C4007		ECEA0JK220	ELECTROLYTIC 6.3V 22	1	
C4008		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C4009		ECUZ1H822KBN	C CHIP 50V 0.0082	1	
C4010		ECUZ1E223KBN	C CHIP 25V 0.022	1	
C4012		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C4013		ECUZ1H103KBN	C CHIP 50V 0.01	1	
C4014		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4015, 4016		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	2	
C4017		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4018		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C4019		ECEA1CK220	ELECTROLYTIC 16V 22	1	
C4102		ECHS1562JZ3	POLYESTER +-5% 100V 5600P	1	
C4103, 4104		ECUZ1H103KBN	C CHIP 50V 0.01	2	
C4106		ECEA1CK220	ELECTROLYTIC 16V 22	1	
C6003, 6004		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	2	
C6005		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C6006		ECUZ1H101JCN	C CHIP +-5% 50V 100P	1	
C6007		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C6010		ECEA0JU471	ELECTROLYTIC 6.3V 470	1	
C6011		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C6015		ECUZ1H561KBN	C CHIP 50V 560P	1	
C6017		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C6023		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C6201		ECEA1EK4R7	ELECTROLYTIC 25V 4.7	1	
C6202		ECUZ1H102KBN	C CHIP 50V 0.001	1	
C6203		ECUZ1H103KBN	C CHIP 50V 0.01	1	
C6204		ECEA0JK330	ELECTROLYTIC 6.3V 33	1	
C6205		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C6206		ECUZ1H103KBN	C CHIP 50V 0.01	1	
C6207		ECEA0JK470	ELECTROLYTIC 6.3V 47	1	
C6208		ECUZ1H470JCN	C CHIP +-5% 50V 47P	1	
C6209		ECUZ1H390JCN	C CHIP +-5% 50V 39P	1	
C6210		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C6211		ECQB1H393KF	POLYESTER 50V 0.039	1	
C6212		ECUZ1H151KN	C CHIP 50V 150P	1	
C6213		ECUZ1H182KBN	C CHIP 50V 0.0018	1	
C6214		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C6215, 6216		VCYR1C104MX	CERAMIC +-20% 16V 0.1	2	
C6217		ECUZ1H272KBN	C CHIP 50V 0.0027	1	
C6218		ECEA0JK220	ELECTROLYTIC 6.3V 22	1	
C6219, 6220		ECEA1HK2R2	ELECTROLYTIC 50V 2.2	2	
C6221		ECUZ1H272KBN	C CHIP 50V 0.0027	1	
C6222		ECEA0JK220	ELECTROLYTIC 6.3V 22	1	
C6223		ECUZ1H102KBN	C CHIP 50V 0.001	1	
C6225		ECEA0JK220	ELECTROLYTIC 6.3V 22	1	
C6226		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C6227		ECUZ1E473ZFN	C CHIP +80%-20% 25V 0.047	1	
C6228		ECEA0JK220	ELECTROLYTIC 6.3V 22	1	
C6229		ECUZ1H472KBN	C CHIP 50V 0.0047	1	
C6230		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C6231		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C7001		ECEA0JK101	ELECTROLYTIC 6.3V 100	1	
C7002		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C7004, 7005		ECUZ1H103KBN	C CHIP 50V 0.01	2	
C7007		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C7008		ECA1CM2211	ELECTROLYTIC 16V 220	1	

(E11, E12)

Ref. No.		Part No.	Part Name & Description	Pcs/ Set	Remarks
C7010		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C7016		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
			DELAY LINE		
DL3001		VLDS0049		1	
			FILTERS		
FL3001		VLFS0209		1	
			COILS		
L3001		ELESN220KA	22	1	
L3002		ELESN680KA	68	1	
L3003		ELESN102KA	1M	1	
L3005		ELESN101KA	100	1	
L3006		ELESN220KA	22	1	
L3007		ELESN271KA	270	1	
L3008		ELESN330KA	33	1	
L3009		ELESN102KA	1M	1	
L3010		ELESN331KA	330	1	
L3011		VLQSH02R180J	+-5% 18	1	
L3012		ELESN470KA	47	1	
L3013		VLQSH02R180J	+-5% 18	1	
L3014		ELESN271KA	270	1	
L3015		ELESN391KA	390	1	
L3201		ELESN470KA	47	1	
L3261		ELESN390KA	39	1	
L3301		VLQSH02R180J	+-5% 18	1	
L3302		ELESN101KA	100	1	
L4001		VLQS0030	15M	1	
L4101		VLQSQ05R471K	470	1	
L6001, 6002		VLQS05R4R7K	4.7	2	
L7001, 7002		ELESN101KA	100	2	
			CRYSTAL OSCILLATOR		
X3001		VSXS0157		1	
X6201		VSXS0123		1	
			PIN HEADERS		
P1201		VJPS0645	9P	1	
P3001		VJPS0642	22P	1	
P4101		VJSS0644	2P	1	
P4102		VJPS0712	19P	1	
P6001		VJPS0712	19P	1	
P6201		VJPS0642	22P	1	
			SWITCHES		
SW6001		VSHS0051	SAFETY TAB SWITCH	1	
SW6002		ESE105SV1	CASSETTE UP/DOWN SWITCH	1	
SW7001		VSSS0142	SELECT SWITCH	1	
			TRANSFORMER		
T4101		EI07QF018Q		1	
			RESISTORS		
J3001, 3002	●	ERD21LL0	CHIP 1/8W 0	2	
			MISCELLANEOUS		
JK3001 (E11)		VJHS0260	PIN JACK	1	
E12		VEQS0553	UHF/VHF TUNER/TV DEMODULATOR	1	
			UNIT		
	■		**MAIN C.B.A.**		
			(F,G,H)		
			INTEGRATED CIRCUITS		
IC3001		AN3460FBS	IC BIPOLAR LINEAR LUMA/CHROMA	1	
IC3221		MN3858S	IC MOS LOGIC 1H CCD DELAY	1	E.S.D.
IC3301		LC7472NM8790	IC MOS LOGIC CHARACTER	1	E.S.D.
			GENERATOR		

● MARK : 0 OHM RESISTOR
WHEN REPLACING, A WIRE CAN BE SUBSTITUTED FOR A 0 OHM RESISTOR.

(E29, E30)

Ref. No.		Part No.	Part Name & Description	Pcs/ Set	Remarks
IC4001		LA7285M	IC BIPOLAR LINEAR AUDIO REC/PB	1	
IC4281		LM833M	IC BIPOLAR LINEAR AMP	1	
IC6001		MN6750405V5M	IC MOS LOGIC SYSTEM	1	E.S.D.
			CTL/SERVO/TIMER		
IC6003		XRA6418N	IC BIPOLAR LINEAR LOADING	1	
			MOTOR DRIVE		
IC6004		VEKS4587	REEL SENSOR UNIT	1	
IC6201		AN1358S	IC BIPOLAR LINEAR OP AMP	1	
			TRANSISTORS		
Q1201	⚠	2SC3852		1	
Q1202		2SC2412KR	CHIP	1	
Q3002, 3003		2SB709(Q)	CHIP	2	
Q3005		2SD601(Q)	CHIP	1	
Q3007		IMX1	COMPLEX COMPONENT SI NPN CHIP	1	
Q3009		2SB710(Q)	CHIP	1	
Q3010		2SB709(Q)	CHIP	1	
Q3101		IMX1	COMPLEX COMPONENT SI NPN CHIP	1	
Q3201		2SB709(Q)	CHIP	1	
Q4101		2SC2412KR	CHIP	1	
Q4281, 4282		UN2215	CHIP	2	
Q6001 (E29)		VEKS4588	PHOTO SENSOR UNIT	1	
Q6002 (E29)		VEKS4588	PHOTO SENSOR UNIT	1	
Q6003		2SC2412KR	CHIP	1	
Q6004		2SA1037KR	CHIP	1	
Q6005		UN211L	CHIP	1	
Q6006		2SC2412KR	CHIP	1	
Q6007		UN2212	CHIP	1	
Q6008		2SB710(Q)	CHIP	1	
Q6009		UN2211	CHIP	1	
Q6201		2SA1037KR	CHIP	1	
Q6202		2SD601(Q)	CHIP	1	
Q6203		UN2212	CHIP	1	
Q7001		2SA1618(Y)	CHIP	1	
			DIODES		
D1201		MA4100N	ZENER 10V	1	
D1202		MA165		1	
D1203, 1204		WG713A		2	
D3002		WG713A		1	
D3005		04AZ9.1ZTPA7	ZENER 9.1V	1	
D3006		04AZ13ZTPA7	ZENER 13V	1	
D3007, 3008		04AZ4.7ZTPA7	ZENER 4.7V	2	
D3101-3104		WG713A		4	
D4281		MA4056-M	ZENER 5.6V	1	
D6001 (E30)		VEKS4589	SENSOR LED	1	
D6002		WG713A		1	
D6004, 6005		WG713A		2	
D6007		WG713A		1	
D6009		WG713A		1	
D6011-6013		WG713A		3	
D6015		WG713A		1	
D6019		WG713A		1	
D6022		WG713A		1	
D6201, 6202		WG713A		2	
D6205-6207		WG713A		3	
D7002		MA1300-H	ZENER 30V	1	
D7004		04AZ4.7ZTPA7	ZENER 4.7V	1	
D7005		04AZ6.8ZTPA7	ZENER 6.8V	1	
D7007		04AZ6.2ZTPA7	ZENER 6.2V	1	
			RESISTORS		
R1201		ERD21LLJ472	CHIP 1/8W 4.7K	1	
R1202		ERDS2TJ183	18K	1	
R1204		ERDS2TJ183	18K	1	
R1205	⚠	ERD2FCVG330T	FUSE +-2% 33	1	
R1209	⚠	ERQ12HJ1R0P	METAL FILM FUSE 1/2W 1	1	
R3001		ERD21LLJ151	CHIP 1/8W 150	1	
R3005		ERD21LLJ151	CHIP 1/8W 150	1	
R3006		EVNDXAA00B13	VARIABLE 1K	1	
R3007		EVNDXAA00B24	VARIABLE 20K	1	
R3008		ERD21LLJ391	CHIP 1/8W 390	1	
R3009		ERD21LLJ332	CHIP 1/8W 3.3K	1	
R3010		EVNDXAA00B53	VARIABLE 5K	1	
R3011, 3012		ERD21LLJ152	CHIP 1/8W 1.5K	2	
R3013		ERD21LLJ102	CHIP 1/8W 1K	1	
R3014		ERD21LLJ122	CHIP 1/8W 1.2K	1	

Ref. No.		Part No.	Part Name & Description	Pcs/Set	Remarks
R3015		EVNDXAA00B53	VARIABLE 5K	1	
R3016		EVNDXAA00B14	VARIABLE 10K	1	
R3017		ERD21LLJ472	CHIP 1/8W 4.7K	1	
R3018		ERD21LLJ272	CHIP 1/8W 2.7K	1	
R3019		ERD21LLJ473	CHIP 1/8W 47K	1	
R3020		ERJ6ENF2700Z	MGF CHIP +-1% 1/10W 270	1	
R3021		ERD21LLJ472	CHIP 1/8W 4.7K	1	
R3022		ERD21LLJ102	CHIP 1/8W 1K	1	
R3023		ERD21LLJ221	CHIP 1/8W 220	1	
R3024, 3025		EVNDXAA00B24	VARIABLE 20K	2	
R3026, 3027		ERD21LLJ102	CHIP 1/8W 1K	2	
R3029		ERD21LLJ224	CHIP 1/8W 220K	1	
R3030, 3031		ERD21LLJ562	CHIP 1/8W 5.6K	2	
R3032		ERD21LLJ102	CHIP 1/8W 1K	1	
R3033		ERD21LLJ224	CHIP 1/8W 220K	1	
R3034		ERD21LLJ472	CHIP 1/8W 4.7K	1	
R3036		ERD21LLJ122	CHIP 1/8W 1.2K	1	
R3037		ERD21LLJ125	CHIP 1/8W 1.2M	1	
R3039		ERD21LLJ103	CHIP 1/8W 10K	1	
R3040		ERD21LLJ822	CHIP 1/8W 8.2K	1	
R3041		ERD21LLJ104	CHIP 1/8W 100K	1	
R3042		ERD21LLJ222	CHIP 1/8W 2.2K	1	
R3043		ERD21LLJ391	CHIP 1/8W 390	1	
R3044		ERD21LLJ473	CHIP 1/8W 47K	1	
R3045		ERD21LLJ821	CHIP 1/8W 820	1	
R3046		ERD21LLJ681	CHIP 1/8W 680	1	
R3047		ERD21LLJ561	CHIP 1/8W 560	1	
R3048		ERD21LLJ102	CHIP 1/8W 1K	1	
R3049		ERD21LLJ821	CHIP 1/8W 820	1	
R3052		ERD21LLJ821	CHIP 1/8W 820	1	
R3053		ERD21LLJ181	CHIP 1/8W 180	1	
R3054		ERD21LLJ152	CHIP 1/8W 1.5K	1	
R3055		ERD21LLJ821	CHIP 1/8W 820	1	
R3056		ERD21LLJ271	CHIP 1/8W 270	1	
R3058		ERD21LLJ152	CHIP 1/8W 1.5K	1	
R3060		ERD21LLJ103	CHIP 1/8W 10K	1	
R3061		ERDS2TJ270	27	1	
R3062		ERD21LLJ122	CHIP 1/8W 1.2K	1	
R3063		ERD21LLJ102	CHIP 1/8W 1K	1	
R3066		ERD21LLJ103	CHIP 1/8W 10K	1	
R3068		ERD21LLJ332	CHIP 1/8W 3.3K	1	
R3069		ERD21LLJ562	CHIP 1/8W 5.6K	1	
R3071		ERD21LLJ561	CHIP 1/8W 560	1	
R3072		ERD21LLJ273	CHIP 1/8W 27K	1	
R3073	⚠	ERDS2TJ101	100	1	
R3074		ERD21LLJ331	CHIP 1/8W 330	1	
R3075, 3076		ERD21LLJ750	CHIP 1/8W 75	2	
R3077		ERD21LLJ122	CHIP 1/8W 1.2K	1	
R3078		ERD21LLJ272	CHIP 1/8W 2.7K	1	
R3080		ERD21LLJ102	CHIP 1/8W 1K	1	
R3084		ERD21LLJ151	CHIP 1/8W 150	1	
R3101		ERD21LLJ473	CHIP 1/8W 47K	1	
R3102		ERD21LLJ681	CHIP 1/8W 680	1	
R3103		ERD21LLJ680	CHIP 1/8W 68	1	
R3104		ERD21LLJ473	CHIP 1/8W 47K	1	
R3105		ERD21LLJ103	CHIP 1/8W 10K	1	
R3106		ERD21LLJ473	CHIP 1/8W 47K	1	
R3201		ERD21LLJ271	CHIP 1/8W 270	1	
R3203		EVNDXAA00B13	VARIABLE 1K	1	
R3221		ERD21LLJ332	CHIP 1/8W 3.3K	1	
R3303-3306		ERD21LLJ222	CHIP 1/8W 2.2K	4	
R3307		ERD21LLJ473	CHIP 1/8W 47K	1	
R4002		ERD21LLJ393	CHIP 1/8W 39K	1	
R4003		ERD21LLJ333	CHIP 1/8W 33K	1	
R4004		ERD21LLG223	CHIP +-2% 1/8W 22K	1	
R4006		ERD21LLJ151	CHIP 1/8W 150	1	
R4007		ERD21LLJ201	CHIP 1/8W 200	1	
R4008		ERD21LLJ821	CHIP 1/8W 820	1	
R4009		ERD21LLJ681	CHIP 1/8W 680	1	
R4010		ERD21LLJ155	CHIP 1/8W 1.5M	1	
R4011		ERD21LLJ103	CHIP 1/8W 10K	1	
R4012		ERD21LLJ334	CHIP 1/8W 330K	1	
R4013		ERD21LLJ102	CHIP 1/8W 1K	1	
R4014		ERD21LLJ182	CHIP 1/8W 1.8K	1	
R4016, 4017		ERD21LLJ682	CHIP 1/8W 6.8K	2	
R4018		ERD21LLJ152	CHIP 1/8W 1.5K	1	
R4101		ERD21LLJ394	CHIP 1/8W 390K	1	
R4102		ERD21LLG473	CHIP +-2% 1/8W 47K	1	
R4103		ERD21LLJ153	CHIP 1/8W 15K	1	
R4281, 4282		ERD21LLJ561	CHIP 1/8W 560	2	

Ref. No.		Part No.	Part Name & Description	Pcs/Set	Remarks
R4283, 4284		ERD21LLG562	CHIP +-2% 1/8W 5.6K	2	
R4285, 4286		ERD21LLG473	CHIP +-2% 1/8W 47K	2	
R4287, 4288		ERD21LLJ561	CHIP 1/8W 560	2	
R4289, 4290		ERD21LLJ391	CHIP 1/8W 390	2	
R4291		ERDS2TJ561	560	1	
R6001		ERD21LLJ333	CHIP 1/8W 33K	1	
R6002		ERD21LLJ223	CHIP 1/8W 22K	1	
R6003		ERD21LLJ332	CHIP 1/8W 3.3K	1	
R6006		ERD21LLJ103	CHIP 1/8W 10K	1	
R6007		ERD21LLJ332	CHIP 1/8W 3.3K	1	
R6008, 6009		ERD21LLJ333	CHIP 1/8W 33K	2	
R6010		ERD21LLJ153	CHIP 1/8W 15K	1	
R6011		ERD21LLJ563	CHIP 1/8W 56K	1	
R6013, 6014		ERD21LLJ102	CHIP 1/8W 1K	2	
R6015		ERD21LLJ472	CHIP 1/8W 4.7K	1	
R6016		ERD21LLJ103	CHIP 1/8W 10K	1	
R6017, 6018		ERD21LLJ102	CHIP 1/8W 1K	2	
R6019		ERD21LLJ332	CHIP 1/8W 3.3K	1	
R6020		ERDS2TJ102	1K	1	
R6021		ERDS2TJ561	560	1	
R6022		ERD21LLJ561	CHIP 1/8W 560	1	
R6023		ERD21LLJ102	CHIP 1/8W 1K	1	
R6024		ERDS2TJ560	56	1	
R6025		ERD21LLJ102	CHIP 1/8W 1K	1	
R6026		ERD21LLJ182	CHIP 1/8W 1.8K	1	
R6027		ERD21LLJ102	CHIP 1/8W 1K	1	
R6028		ERD21LLJ475	CHIP 1/8W 4.7M	1	
R6030		ERDS2TJ821	820	1	
R6032		ERD21LLJ473	CHIP 1/8W 47K	1	
R6035, 6036	⚠	ERG1SJ120E	METAL OXIDE 1W 12	2	
R6037-6039		ERDS2TJ471	470	3	
R6041		ERD21LLJ224	CHIP 1/8W 220K	1	
R6042, 6043		ERD21LLJ153	CHIP 1/8W 15K	2	
R6044-6058		ERD21LLJ223	CHIP 1/8W 22K	15	
R6059		ERD21LLJ473	CHIP 1/8W 47K	1	
R6060		ERD21LLJ102	CHIP 1/8W 1K	1	
R6061, 6062		ERDS2TJ223	22K	2	
R6063-6074		ERD21LLJ223	CHIP 1/8W 22K	12	
R6075		ERD21LLJ563	CHIP 1/8W 56K	1	
R6076, 6077		ERD21LLJ223	CHIP 1/8W 22K	2	
R6078		ERD21LLJ563	CHIP 1/8W 56K	1	
R6081, 6082		ERD21LLJ223	CHIP 1/8W 22K	2	
R6085		ERD21LLJ102	CHIP 1/8W 1K	1	
R6086, 6087		ERD21LLJ154	CHIP 1/8W 150K	2	
R6088, 6089		ERD21LLJ102	CHIP 1/8W 1K	2	
R6091		ERD21LLJ822	CHIP 1/8W 8.2K	1	
R6093		ERD21LLJ332	CHIP 1/8W 3.3K	1	
R6098, 6099		ERD21LLJ223	CHIP 1/8W 22K	2	
R6201		EVMF6SA00B15	VARIABLE 100K	1	
R6202		ERD21LLJ473	CHIP 1/8W 47K	1	
R6203		ERD21LLJ392	CHIP 1/8W 3.9K	1	
R6204		ERD21LLJ222	CHIP 1/8W 2.2K	1	
R6205		ERD21LLJ394	CHIP 1/8W 390K	1	
R6206		ERD21LLJ123	CHIP 1/8W 12K	1	
R6207		ERD21LLJ823	CHIP 1/8W 82K	1	
R6208		ERD21LLJ394	CHIP 1/8W 390K	1	
R6209		ERD21LLJ124	CHIP 1/8W 120K	1	
R6210		ERD21LLJ103	CHIP 1/8W 10K	1	
R6211		ERD21LLJ223	CHIP 1/8W 22K	1	
R6212		ERD21LLJ103	CHIP 1/8W 10K	1	
R6213		ERD21LLJ472	CHIP 1/8W 4.7K	1	
R6214		ERD21LLJ154	CHIP 1/8W 150K	1	
R6215		ERD21LLJ473	CHIP 1/8W 47K	1	
R6216		ERD21LLJ224	CHIP 1/8W 220K	1	
R6217		ERD21LLJ221	CHIP 1/8W 220	1	
R6218		ERD21LLJ472	CHIP 1/8W 4.7K	1	
R6219		ERD21LLJ221	CHIP 1/8W 220	1	
R6220		ERD21LLJ103	CHIP 1/8W 10K	1	
R6221		ERD21LLJ222	CHIP 1/8W 2.2K	1	
R6222		ERD21LLJ472	CHIP 1/8W 4.7K	1	
R6223		ERD21LLJ225	CHIP 1/8W 2.2M	1	
R6224		ERD21LLJ221	CHIP 1/8W 220	1	
R6225		ERD21LLJ103	CHIP 1/8W 10K	1	
R6226		ERD21LLJ102	CHIP 1/8W 1K	1	
R6227		ERD21LLJ332	CHIP 1/8W 3.3K	1	
R6228, 6229		ERD21LLJ243	CHIP 1/8W 24K	2	
R6231		ERD21LLJ472	CHIP 1/8W 4.7K	1	
R6232, 6233		ERD21LLJ103	CHIP 1/8W 10K	2	
R6234		ERD21LLJ222	CHIP 1/8W 2.2K	1	
R6235		ERD21LLJ152	CHIP 1/8W 1.5K	1	

Ref. No.		Part No.	Part Name & Description	Pcs/ Set	Remarks
R6238		ERD21LLJ102	CHIP 1/8W 1K	1	
R6240		ERD21LLJ272	CHIP 1/8W 2.7K	1	
R6241		ERD21LLJ102	CHIP 1/8W 1K	1	
R6242		ERD21LLJ272	CHIP 1/8W 2.7K	1	
R6244		ERD21LLJ472	CHIP 1/8W 4.7K	1	
R6245		ERD21LLJ102	CHIP 1/8W 1K	1	
R6246		ERD21LLJ223	CHIP 1/8W 22K	1	
R6247		ERD21LLJ472	CHIP 1/8W 4.7K	1	
R6248		ERD21LLJ103	CHIP 1/8W 10K	1	
R7002		ERD21LLJ271	CHIP 1/8W 270	1	
R7003, 7004		ERDS2TJ332	3.3K	2	
R7005		ERD21LLJ472	CHIP 1/8W 4.7K	1	
R7006		ERD21LLJ102	CHIP 1/8W 1K	1	
R7007		ERD21LLJ562	CHIP 1/8W 5.6K	1	
R7008		ERD21LLJ102	CHIP 1/8W 1K	1	
R7009		ERDS2TJ221	220	1	
R7010		EVNDXAA00B14	VARIABLE 10K	1	
R7011		ERD21LLJ392	CHIP 1/8W 3.9K	1	
R7012, 7013		ERDS2TJ681	680	2	
R7015		ERD21LLJ562	CHIP 1/8W 5.6K	1	
			CAPACITORS		
C1201		ECEA1HKR47	ELECTROLYTIC 50V 0.47	1	
C1202		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C1204		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C3001		ECUZ1H680JCN	C CHIP +-5% 50V 68P	1	
C3002		ECUZ1H330JCN	C CHIP +-5% 50V 33P	1	
C3004		ECUZ1H223ZFN	C CHIP +80%-20% 50V 0.022	1	
C3005		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C3008, 3009		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	2	
C3010		ECEA1HKR47	ELECTROLYTIC 50V 0.47	1	
C3011		ECUZ1H561KBN	C CHIP 50V 560P	1	
C3012		ECUZ1H821KBN	C CHIP 50V 820P	1	
C3013		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C3014		ECUZ1H560JCN	C CHIP +-5% 50V 56P	1	
C3015, 3016		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	2	
C3017		ECUZ1H100DCN	C CHIP +-0.5P 50V 10P	1	
C3018		ECUZ1H102KBN	C CHIP 50V 0.001	1	
C3019		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C3020		ECEA0JK470	ELECTROLYTIC 6.3V 47	1	
C3021, 3022		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	2	
C3023		ECUZ1C474ZFN	C CHIP +80%-20% 16V 0.47	1	
C3024, 3025		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	2	
C3026		ECUZ1H223ZFN	C CHIP +80%-20% 50V 0.022	1	
C3027		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C3029, 3030		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	2	
C3031		ECA0JM102B	ELECTROLYTIC 6.3V 1000	1	
C3032-3034		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	3	
C3035		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C3036, 3037		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	2	
C3038		ECEA1EK3R3	ELECTROLYTIC 25V 3.3	1	
C3039		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C3040		ECEA0JK221	ELECTROLYTIC 6.3V 220	1	
C3041, 3042		ECUZ1H180JCN	C CHIP +-5% 50V 18P	2	
C3043		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C3044		ECUZ1H560JCN	C CHIP +-5% 50V 56P	1	
C3045		ECUZ1H220JCN	C CHIP +-5% 50V 22P	1	
C3046		ECEA0JK470	ELECTROLYTIC 6.3V 47	1	
C3047		ECUZ1H560JCN	C CHIP +-5% 50V 56P	1	
C3048		ECUZ1H181JCN	C CHIP +-5% 50V 180P	1	
C3049		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C3050		ECUZ1H680JCN	C CHIP +-5% 50V 68P	1	
C3051		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C3052		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C3054		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C3055		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C3056		ECUZ1H223ZFN	C CHIP +80%-20% 50V 0.022	1	
C3057		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C3058		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C3060		ECUZ1H121JCN	C CHIP +-5% 50V 120P	1	
C3061		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C3062		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C3064		ECUZ1H222KBN	C CHIP 50V 0.0022	1	
C3065		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C3066, 3067		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	2	
C3069		ECUZ1H150JCN	C CHIP +-5% 50V 15P	1	
C3070		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C3071		ECEA0JU471	ELECTROLYTIC 6.3V 470	1	
C3072		ECEA0JK101	ELECTROLYTIC 6.3V 100	1	
C3073		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C3075		ECUZ1H220JCN	C CHIP +-5% 50V 22P	1	
C3076		ECUZ1H121JCN	C CHIP +-5% 50V 120P	1	
C3078		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C3079		ECUZ1H101JCN	C CHIP +-5% 50V 100P	1	
C3080		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C3081		ECUZ1H121JCN	C CHIP +-5% 50V 120P	1	
C3201		ECEA0JK470	ELECTROLYTIC 6.3V 47	1	
C3202		ECEA1EK4R7	ELECTROLYTIC 25V 4.7	1	
C3203		ECUZ1H560JCN	C CHIP +-5% 50V 56P	1	
C3204		ECUZ1H101JCN	C CHIP +-5% 50V 100P	1	
C3205		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C3221		ECUZ1H102KBN	C CHIP 50V 0.001	1	
C3222		ECUZ1C104ZFN	C CHIP +80%-20% 16V 0.1	1	
C3223		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C3224		ECEA1HK2R2	ELECTROLYTIC 50V 2.2	1	
C3281		ECUZ1H121JCN	C CHIP +-5% 50V 120P	1	
C3301		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C3302		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C3303		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C3304		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C3305		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C3306		ECUZ1H120JCN	C CHIP +-5% 50V 12P	1	
C3307		ECUZ1H220JCN	C CHIP +-5% 50V 22P	1	
C3308		ECUZ1H090CCN	C CHIP +-0.25P 50V 9P	1	
C3309		ECUZ1H181JCN	C CHIP +-5% 50V 180P	1	
C3310		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C3311		ECEA0JK470	ELECTROLYTIC 6.3V 47	1	
C4002		ECUZ1H102KBN	C CHIP 50V 0.001	1	
C4003		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4005		ECUZ1H272KBN	C CHIP 50V 0.0027	1	
C4006		ECEA1HKR47	ELECTROLYTIC 50V 0.47	1	
C4007		ECEA0JK220	ELECTROLYTIC 6.3V 22	1	
C4008		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C4009		ECUZ1H822KBN	C CHIP 50V 0.0082	1	
C4010		ECUZ1E223KBN	C CHIP 25V 0.022	1	
C4012		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C4013		ECUZ1H103KBN	C CHIP 50V 0.01	1	
C4014		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4016		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C4017		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4019		ECEA1CK220	ELECTROLYTIC 16V 22	1	
C4102		ECHS1562JZ3	POLYESTER +-5% 100V 5600P	1	
C4103, 4104		ECUZ1H103KBN	C CHIP 50V 0.01	2	
C4106		ECEA1CK220	ELECTROLYTIC 16V 22	1	
C4281		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C4282, 4283		ECEA1CK100	ELECTROLYTIC 16V 10	2	
C6004		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C6005		ECUZ1H470JCN	C CHIP +-5% 50V 47P	1	
C6006		ECUZ1H101JCN	C CHIP +-5% 50V 100P	1	
C6007		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C6010		ECEA0JU471	ELECTROLYTIC 6.3V 470	1	
C6012		ECEA0JK101	ELECTROLYTIC 6.3V 100	1	
C6015		ECUZ1H102KBN	C CHIP 50V 0.001	1	
C6020		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C6201		ECEA1EK4R7	ELECTROLYTIC 25V 4.7	1	
C6202		ECUZ1H102KBN	C CHIP 50V 0.001	1	
C6203		ECUZ1H103KBN	C CHIP 50V 0.01	1	
C6204		ECEA0JK330	ELECTROLYTIC 6.3V 33	1	
C6205		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C6206		ECUZ1H103KBN	C CHIP 50V 0.01	1	
C6207		ECEA0JK470	ELECTROLYTIC 6.3V 47	1	
C6208		ECUZ1H470JCN	C CHIP +-5% 50V 47P	1	
C6209		ECUZ1H390JCN	C CHIP +-5% 50V 39P	1	
C6210		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C6211		ECQB1H393KF	POLYESTER 50V 0.039	1	
C6212		ECUZ1H151KN	C CHIP 50V 150P	1	
C6213		ECUZ1H182KBN	C CHIP 50V 0.0018	1	
C6214		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C6215, 6216		VCYR1C104MX	CERAMIC +-20% 16V 0.1	2	
C6217		ECUZ1H272KBN	C CHIP 50V 0.0027	1	
C6218		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C6219, 6220		ECEA1HK2R2	ELECTROLYTIC 50V 2.2	2	
C6221		ECUZ1H272KBN	C CHIP 50V 0.0027	1	
C6222		ECEA0JK220	ELECTROLYTIC 6.3V 22	1	
C6223		ECUZ1H102KBN	C CHIP 50V 0.001	1	
C6225		ECEA0JK220	ELECTROLYTIC 6.3V 22	1	
C6226		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C6227		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C6228		ECEA0JK221	ELECTROLYTIC 6.3V 220	1	

(E2,E7,E11)

Ref. No.		Part No.	Part Name & Description	Pcs/ Set	Remarks
C6229		ECUZ1H472KBN	C CHIP 50V 0.0047	1	
C6230		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C6232		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C7001		ECEA0JU101	ELECTROLYTIC 6.3V 100	1	
C7007		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C7008		ECA1CM221I	ELECTROLYTIC 16V 220	1	
C7010		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C7013		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C7016		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
			DELAY LINE		
DL3001		VLDS0049		1	
			COILS		
L3001		ELESN220KA	22	1	
L3002		ELESN680KA	68	1	
L3003		ELESN101KA	100	1	
L3004		ELESN390KA	39	1	
L3005		ELESN101KA	100	1	
L3006		ELESN220KA	22	1	
L3007		ELESN271KA	270	1	
L3008		ELESN330KA	33	1	
L3009		ELESN102KA	1M	1	
L3010		ELESN331KA	330	1	
L3011		ELESN180KA	18	1	
L3012		ELESN470KA	47	1	
L3014		ELESN470KA	47	1	
L3201		ELESN470KA	47	1	
L3261		ELESN101KA	100	1	
L3301		ELESN180KA	18	1	
L3302		ELESN101KA	100	1	
L4001		VLQS0030	15M	1	
L4101		VLQS005R471K	470	1	
L6002		VLQS05R4R7K	4.7	1	
L7001		ELESN101KA	100	1	
L7002		VLQS0151	220	1	
			CRYSTAL OSCILLATOR		
X3001		VSXS0179		1	
X6201		VSXS0123		1	
			PIN HEADERS		
P1201		VJPS0645	9P	1	
P3001		VJPS0641	24P	1	
P4101		VJSS0644	2P	1	
P6001		VJPS0713	15P	1	
P6201		VJPS0642	22P	1	
			SWITCHES		
SW6001		VSHS0030	SAFETY TAB SWITCH	1	
SW6002		ESE105SV1	CASSETTE UP/DOWN SWITCH	1	
SW7001		VSSS0142	SELECT SWITCH	1	
			TRANSFORMER		
T4101		EIQ7QF0180		1	
			RESISTORS		
J6013	●	ERD21LL0	CHIP 1/8W 0	1	
		(G)			
			PRINTED CIRCUIT BOARD ASSEMBLY		
E2	▲	VEPS04110A1	Hi-Fi AUDIO C.B.A.	1	
E7	▲	VEPS0915A1	MTS/SAP C.B.A.	1	
		(F)			
E7	▲	VEPS0914A1	MTS/SAP C.B.A.		
		(G,H)			
			MISCELLANEOUS		
JK3001(E11)		VJHS0323	A/V JACK	1	

● MARK : 0 OHM RESISTOR
WHEN REPLACING, A WIRE CAN BE SUBSTITUTED FOR A 0 OHM RESISTOR.

(E12,E29,E30)

Ref. No.		Part No.	Part Name & Description	Pcs/ Set	Remarks
E12		VEQS0559	UHF/VHF TUNER/TV DEMODULATOR	1	
			UNIT		
	■		**MAIN C.B.A.**		
			(I)		
			INTEGRATED CIRCUITS		
IC3001		AN3460FBS	IC BIPOLAR LINEAR LUMA/CHROMA	1	
IC3221		MN3858S	IC MOS LOGIC 1H CCD DELAY	1	E.S.D.
IC3301		LC7472NM8790	IC MOS LOGIC CHARACTER	1	E.S.D.
			GENERATOR		
IC3401		TC4W66F	IC BIPOLAR LINEAR INPUT SELECT	1	
IC4001		LA7285M	IC BIPOLAR LINEAR AUDIO REC/PB	1	
IC4281		LM833M	IC BIPOLAR LINEAR AMP	1	
IC4301		CD4053BCM	IC MOS LOGIC INPUT SELECT	1	E.S.D.
IC4351		M62302FP	IC BIPOLAR LINEAR LEVEL METER	1	
			DRIVE.		
IC6001		MN6750245V5G	IC MOS LOGIC SYSTEM CTL/SERVO	1	E.S.D.
IC6003		XRA6418N	IC BIPOLAR LINEAR LOADING	1	
			MOTOR DRIVE		
IC6004		VEKS4587	REEL SENSOR UNIT	1	
IC6201		AN1358S	IC BIPOLAR LINEAR OP AMP	1	
			TRANSISTORS		
Q1201	⚠	2SC3852		1	
	⚠	OR 2SD1776(P,Q)			
Q1202		2SC2412KR	CHIP	1	
Q3002,3003		2SB709(Q)	CHIP	2	
Q3005		2SD601(Q)	CHIP	1	
Q3007		IMX1	COMPLEX COMPONENT SI NPN CHIP	1	
Q3009		2SB710(Q)	CHIP	1	
Q3010		2SB709(Q)	CHIP	1	
Q3101		IMX1	COMPLEX COMPONENT SI NPN CHIP	1	
Q3201		2SB709(Q)	CHIP	1	
Q3402		UN2112	CHIP	1	
Q4101		2SC2412KR	CHIP	1	
Q4281,4282		UN2215	CHIP	2	
Q4283,4284		DTC144EK	CHIP	2	
Q4351,4352		UN2215	CHIP	2	
Q6001(E29)		VEKS4588	PHOTO SENSOR UNIT	1	
Q6002(E29)		VEKS4588	PHOTO SENSOR UNIT	1	
Q6003		2SC2412KR	CHIP	1	
Q6004		2SA1037KR	CHIP	1	
Q6005		UN2212	CHIP	1	
Q6006		2SA1037KR	CHIP	1	
Q6007		2SB710(Q)	CHIP	1	
Q6015		UN2211	CHIP	1	
Q6016		2SA1037KR	CHIP	1	
Q6201		2SA1037KR	CHIP	1	
Q7001		2SA1618(Y)	CHIP	1	
			DIODES		
D1201		MA4100N	ZENER 10V	1	
D1202,1203		WG713A		2	
D1204		MA165		1	
D3002		WG713A		1	
D3005		04AZ9.1ZTPA7	ZENER 9.1V	1	
D3006		04AZ13ZTPA7	ZENER 13V	1	
D3007,3008		04AZ4.7ZTPA7	ZENER 4.7V	2	
D3101-3104		WG713A		4	
D3401,3402		04AZ4.7ZTPA7	ZENER 4.7V	2	
D4281		MA4056-M	ZENER 5.6V	1	
D6001(E30)		VEKS4589	SENSOR LED	1	
D6002,6003		WG713A		2	
D6201-6204		WG713A		4	
D7002		MA1300-H	ZENER 30V	1	
D7004		04AZ4.7ZTPA7	ZENER 4.7V	1	
D7005		04AZ6.8ZTPA7	ZENER 6.8V	1	
D7007		04AZ6.2ZTPA7	ZENER 6.2V	1	
			RESISTORS		
R1201		ERD21LLJ472	CHIP 1/8W 4.7K	1	
R1202		ERDS2TJ183	18K	1	
R1204		ERDS2TJ183	18K	1	
R1205	⚠	ERQ2FCVG330T	FUSE +-2% 33	1	
R1209	⚠	ERQ12HJ1R0P	METAL FILM FUSE 1/2W 1	1	

Ref. No.		Part No.	Part Name & Description	Pcs/ Set	Remarks
R3001		ERD21LLJ151	CHIP 1/8W 150	1	
R3005		ERD21LLJ151	CHIP 1/8W 150	1	
R3006		EVNDXAA00B13	VARIABLE 1K	1	
R3007		EVNDXAA00B24	VARIABLE 20K	1	
R3008		ERD21LLJ391	CHIP 1/8W 390	1	
R3009		ERD21LLJ332	CHIP 1/8W 3.3K	1	
R3010		EVNDXAA00B53	VARIABLE 5K	1	
R3011, 3012		ERD21LLJ152	CHIP 1/8W 1.5K	2	
R3013		ERD21LLJ102	CHIP 1/8W 1K	1	
R3014		ERD21LLJ122	CHIP 1/8W 1.2K	1	
R3015		EVNDXAA00B53	VARIABLE 5K	1	
R3016		EVNDXAA00B14	VARIABLE 10K	1	
R3017		ERD21LLJ472	CHIP 1/8W 4.7K	1	
R3018		ERD21LLJ272	CHIP 1/8W 2.7K	1	
R3019		ERD21LLJ473	CHIP 1/8W 47K	1	
R3020		ERJ6ENF2700Z	MGF CHIP +-1% 1/10W 270	1	
R3021		ERD21LLJ472	CHIP 1/8W 4.7K	1	
R3022		ERD21LLJ102	CHIP 1/8W 1K	1	
R3023		ERD21LLJ221	CHIP 1/8W 220	1	
R3024, 3025		EVNDXAA00B24	VARIABLE 20K	2	
R3026, 3027		ERD21LLJ102	CHIP 1/8W 1K	2	
R3029		ERD21LLJ224	CHIP 1/8W 220K	1	
R3030, 3031		ERD21LLJ562	CHIP 1/8W 5.6K	2	
R3032		ERD21LLJ102	CHIP 1/8W 1K	1	
R3033		ERD21LLJ224	CHIP 1/8W 220K	1	
R3034		ERD21LLJ472	CHIP 1/8W 4.7K	1	
R3036		ERD21LLJ122	CHIP 1/8W 1.2K	1	
R3037		ERD21LLJ125	CHIP 1/8W 1.2M	1	
R3039		ERD21LLJ103	CHIP 1/8W 10K	1	
R3040		ERD21LLJ822	CHIP 1/8W 8.2K	1	
R3041		ERD21LLJ104	CHIP 1/8W 100K	1	
R3042		ERD21LLJ222	CHIP 1/8W 2.2K	1	
R3043		ERD21LLJ391	CHIP 1/8W 390	1	
R3044		ERD21LLJ473	CHIP 1/8W 47K	1	
R3045		ERD21LLJ821	CHIP 1/8W 820	1	
R3046		ERD21LLJ681	CHIP 1/8W 680	1	
R3047		ERD21LLJ561	CHIP 1/8W 560	1	
R3048		ERD21LLJ102	CHIP 1/8W 1K	1	
R3049		ERD21LLJ821	CHIP 1/8W 820	1	
R3052		ERD21LLJ821	CHIP 1/8W 820	1	
R3053		ERD21LLJ181	CHIP 1/8W 180	1	
R3054		ERD21LLJ152	CHIP 1/8W 1.5K	1	
R3055		ERD21LLJ821	CHIP 1/8W 820	1	
R3056		ERD21LLJ271	CHIP 1/8W 270	1	
R3058		ERD21LLJ152	CHIP 1/8W 1.5K	1	
R3060		ERD21LLJ103	CHIP 1/8W 10K	1	
R3061		ERDS2TJ270	27	1	
R3062		ERD21LLJ122	CHIP 1/8W 1.2K	1	
R3063		ERD21LLJ102	CHIP 1/8W 1K	1	
R3066		ERD21LLJ103	CHIP 1/8W 10K	1	
R3068		ERD21LLJ332	CHIP 1/8W 3.3K	1	
R3069		ERD21LLJ562	CHIP 1/8W 5.6K	1	
R3071		ERD21LLJ561	CHIP 1/8W 560	1	
R3072		ERD21LLJ273	CHIP 1/8W 27K	1	
R3073	⚠	ERDS2TJ101	100	1	
R3074		ERDS2TJ331	330	1	
R3075		ERD21LLJ750	CHIP 1/8W 75	1	
R3076		ERDS2TJ750	75	1	
R3077		ERD21LLJ122	CHIP 1/8W 1.2K	1	
R3078		ERD21LLJ272	CHIP 1/8W 2.7K	1	
R3080		ERD21LLJ332	CHIP 1/8W 3.3K	1	
R3081		ERD21LLJ392	CHIP 1/8W 3.9K	1	
R3084		ERD21LLJ151	CHIP 1/8W 150	1	
R3101		ERD21LLJ473	CHIP 1/8W 47K	1	
R3102		ERD21LLJ681	CHIP 1/8W 680	1	
R3103		ERD21LLJ680	CHIP 1/8W 68	1	
R3104		ERD21LLJ473	CHIP 1/8W 47K	1	
R3105		ERD21LLJ103	CHIP 1/8W 10K	1	
R3106		ERD21LLJ473	CHIP 1/8W 47K	1	
R3201		ERD21LLJ271	CHIP 1/8W 270	1	
R3203		EVNDXAA00B13	VARIABLE 1K	1	
R3221		ERD21LLJ332	CHIP 1/8W 3.3K	1	
R3303-3306		ERD21LLJ222	CHIP 1/8W 2.2K	4	
R3307		ERD21LLJ473	CHIP 1/8W 47K	1	
R3402		ERD21LLJ103	CHIP 1/8W 10K	1	
R3404		ERD21LLJ103	CHIP 1/8W 10K	1	
R3405		ERD21LLJ562	CHIP 1/8W 5.6K	1	
R4002		ERD21LLJ393	CHIP 1/8W 39K	1	
R4003		ERD21LLJ333	CHIP 1/8W 33K	1	
R4004		ERD21LLG223	CHIP +-2% 1/8W 22K	1	

Ref. No.		Part No.	Part Name & Description	Pcs/ Set	Remarks
R4006		ERD21LLJ151	CHIP 1/8W 150	1	
R4007		ERD21LLJ201	CHIP 1/8W 200	1	
R4008		ERD21LLJ821	CHIP 1/8W 820	1	
R4009		ERD21LLJ681	CHIP 1/8W 680	1	
R4010		ERD21LLJ155	CHIP 1/8W 1.5M	1	
R4011		ERD21LLJ103	CHIP 1/8W 10K	1	
R4012		ERD21LLJ334	CHIP 1/8W 330K	1	
R4013		ERD21LLJ102	CHIP 1/8W 1K	1	
R4014		ERD21LLJ182	CHIP 1/8W 1.8K	1	
R4016, 4017		ERD21LLJ682	CHIP 1/8W 6.8K	2	
R4018		ERDS2TJ152	1.5K	1	
R4101		ERD21LLJ394	CHIP 1/8W 390K	1	
R4102		EROS2TKG4702	METAL FILM CHIP 47K	1	
R4103		ERD21LLJ153	CHIP 1/8W 15K	1	
R4281, 4282		ERD21LLJ561	CHIP 1/8W 560	2	
R4283, 4284		ERD21LLG562	CHIP +-2% 1/8W 5.6K	2	
R4285, 4286		ERD21LLG473	CHIP +-2% 1/8W 47K	2	
R4287, 4288		ERD21LLJ561	CHIP 1/8W 560	2	
R4289, 4290		ERD21LLJ391	CHIP 1/8W 390	2	
R4291		ERDS2TJ561	560	1	
R4293-4296		ERD21LLJ103	CHIP 1/8W 10K	4	
R4301		ERD21LLJ561	CHIP 1/8W 560	1	
R4302		ERD21LLJ223	CHIP 1/8W 22K	1	
R4304		ERD21LLJ561	CHIP 1/8W 560	1	
R4305		ERD21LLJ333	CHIP 1/8W 33K	1	
R4351, 4352		ERD21LLJ473	CHIP 1/8W 47K	2	
R4353, 4354		ERD21LLJ392	CHIP 1/8W 3.9K	2	
R4355, 4356		ERD21LLJ152	CHIP 1/8W 1.5K	2	
R6002		ERD21LLJ223	CHIP 1/8W 22K	1	
R6003-6005		ERD21LLJ563	CHIP 1/8W 56K	3	
R6006-6008		ERD21LLJ102	CHIP 1/8W 1K	3	
R6009		ERD21LLJ472	CHIP 1/8W 4.7K	1	
R6010, 6011		ERD21LLJ221	CHIP 1/8W 220	2	
R6012		ERD21LLJ333	CHIP 1/8W 33K	1	
R6013-6015		ERD21LLJ332	CHIP 1/8W 3.3K	3	
R6016		ERD21LLJ333	CHIP 1/8W 33K	1	
R6017-6021		ERD21LLJ102	CHIP 1/8W 1K	5	
R6022, 6023		ERD21LLJ221	CHIP 1/8W 220	2	
R6024		ERD21LLJ471	CHIP 1/8W 470	1	
R6025		ERD21LLJ103	CHIP 1/8W 10K	1	
R6028		ERD21LLJ223	CHIP 1/8W 22K	1	
R6029		ERD21LLJ272	CHIP 1/8W 2.7K	1	
R6032		ERD21LLJ224	CHIP 1/8W 220K	1	
R6033, 6034		ERD21LLJ153	CHIP 1/8W 15K	2	
R6035-6044		ERD21LLJ223	CHIP 1/8W 22K	10	
R6045-6048		ERDS2TJ223	22K	4	
R6049		ERD21LLJ223	CHIP 1/8W 22K	1	
R6051, 6052		ERD21LLJ223	CHIP 1/8W 22K	2	
R6053		ERD21LLJ102	CHIP 1/8W 1K	1	
R6054		ERD21LLJ223	CHIP 1/8W 22K	1	
R6055		ERD21LLJ102	CHIP 1/8W 1K	1	
R6056, 6057		ERD21LLJ223	CHIP 1/8W 22K	2	
R6058		ERDS2TJ683	68K	1	
R6062		ERDS2TJ473	47K	1	
R6063		ERDS2TJ683	68K	1	
R6064		ERD21LLJ333	CHIP 1/8W 33K	1	
R6065		ERD21LLJ223	CHIP 1/8W 22K	1	
R6066		ERDS2TJ821	820	1	
R6069-6071		ERDS2TJ471	470	3	
R6072		ERD21LLJ102	CHIP 1/8W 1K	1	
R6073		ERDS2TJ560	56	1	
R6075, 6076	⚠	ERG1SJ120E	METAL OXIDE 1W 12	2	
R6077		ERDS2TJ822	8.2K	1	
R6078		ERD21LLJ103	CHIP 1/8W 10K	1	
R6079		ERD21LLJ332	CHIP 1/8W 3.3K	1	
R6080		ERD21LLJ392	CHIP 1/8W 3.9K	1	
R6081		ERDS2TJ223	22K	1	
R6082		ERDS2TJ224T	220K	1	
R6201		EVMF6SA00B15	VARIABLE 100K	1	
R6202		ERD21LLJ473	CHIP 1/8W 47K	1	
R6203		ERD21LLJ392	CHIP 1/8W 3.9K	1	
R6204		ERD21LLJ222	CHIP 1/8W 2.2K	1	
R6205		ERD21LLJ394	CHIP 1/8W 390K	1	
R6206		ERD21LLJ123	CHIP 1/8W 12K	1	
R6207		ERD21LLJ823	CHIP 1/8W 82K	1	
R6208		ERD21LLJ394	CHIP 1/8W 390K	1	
R6209		ERD21LLJ124	CHIP 1/8W 120K	1	
R6210		ERD21LLJ103	CHIP 1/8W 10K	1	
R6211		ERD21LLJ223	CHIP 1/8W 22K	1	
R6212		ERD21LLJ103	CHIP 1/8W 10K	1	

Ref. No.		Part No.	Part Name & Description	Pcs/ Set	Remarks
R6213		ERD21LLJ472	CHIP 1/8W 4.7K	1	
R6214		ERD21LLJ154	CHIP 1/8W 150K	1	
R6215		ERD21LLJ473	CHIP 1/8W 47K	1	
R6216		ERD21LLJ224	CHIP 1/8W 220K	1	
R6217		ERD21LLJ221	CHIP 1/8W 220	1	
R6218		ERD21LLJ472	CHIP 1/8W 4.7K	1	
R6219		ERD21LLJ221	CHIP 1/8W 220	1	
R6220		ERD21LLJ103	CHIP 1/8W 10K	1	
R6221		ERD21LLJ222	CHIP 1/8W 2.2K	1	
R6222		ERD21LLJ472	CHIP 1/8W 4.7K	1	
R6223		ERD21LLJ475	CHIP 1/8W 4.7M	1	
R6224		ERD21LLJ221	CHIP 1/8W 220	1	
R6225		ERD21LLJ103	CHIP 1/8W 10K	1	
R6226		ERD21LLJ102	CHIP 1/8W 1K	1	
R6227		ERD21LLJ332	CHIP 1/8W 3.3K	1	
R6228, 6229		ERD21LLJ243	CHIP 1/8W 24K	2	
R6231		ERD21LLJ472	CHIP 1/8W 4.7K	1	
R6232, 6233		ERD21LLJ103	CHIP 1/8W 10K	2	
R6234		ERD21LLJ222	CHIP 1/8W 2.2K	1	
R6235		ERD21LLJ152	CHIP 1/8W 1.5K	1	
R6238		ERD21LLJ102	CHIP 1/8W 1K	1	
R6241		ERD21LLJ223	CHIP 1/8W 22K	1	
R7002		ERD21LLJ271	CHIP 1/8W 270	1	
R7003, 7004		ERDS2TJ332	3.3K	2	
R7005		ERD21LLJ472	CHIP 1/8W 4.7K	1	
R7006		ERD21LLJ102	CHIP 1/8W 1K	1	
R7007		ERD21LLJ562	CHIP 1/8W 5.6K	1	
R7008		ERD21LLJ102	CHIP 1/8W 1K	1	
R7009		ERDS2TJ221	220	1	
R7010		EVNDXAA00B14	VARIABLE 10K	1	
R7011		ERD21LLJ392	CHIP 1/8W 3.9K	1	
R7012, 7013		ERDS2TJ681	680	2	
R7015		ERD21LLJ562	CHIP 1/8W 5.6K	1	
			CAPACITORS		
C1201		ECEA1HKR47	ELECTROLYTIC 50V 0.47	1	
C1202		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C1204		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C3001		ECUZ1H680JCN	C CHIP +-5% 50V 68P	1	
C3002		ECUZ1H330JCN	C CHIP +-5% 50V 33P	1	
C3004		ECUZ1H223ZFN	C CHIP +80%-20% 50V 0.022	1	
C3005		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C3008, 3009		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	2	
C3010		ECEA1HKR47	ELECTROLYTIC 50V 0.47	1	
C3011		ECUZ1H561KBN	C CHIP 50V 560P	1	
C3012		ECUZ1H821KBN	C CHIP 50V 820P	1	
C3013		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C3014		ECUZ1H560JCN	C CHIP +-5% 50V 56P	1	
C3015, 3016		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	2	
C3017		ECUZ1H100DCN	C CHIP +-0.5P 50V 10P	1	
C3018		ECUZ1H102KBN	C CHIP 50V 0.001	1	
C3019		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C3020		ECEA0JK470	ELECTROLYTIC 6.3V 47	1	
C3021, 3022		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	2	
C3023		ECUZ1C474ZFN	C CHIP +80%-20% 16V 0.47	1	
C3024, 3025		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	2	
C3026		ECUZ1H223ZFN	C CHIP +80%-20% 50V 0.022	1	
C3027		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C3029, 3030		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	2	
C3031		ECA0JM102B	ELECTROLYTIC 6.3V 1000	1	
C3032-3034		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	3	
C3035		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C3036, 3037		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	2	
C3038		ECEA1EK3R3	ELECTROLYTIC 25V 3.3	1	
C3039		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C3040		ECEA0JK221	ELECTROLYTIC 6.3V 220	1	
C3041, 3042		ECUZ1H180JCN	C CHIP +-5% 50V 18P	2	
C3043		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C3044		ECUZ1H560JCN	C CHIP +-5% 50V 56P	1	
C3045		ECUZ1H220JCN	C CHIP +-5% 50V 22P	1	
C3046		ECEA0JK470	ELECTROLYTIC 6.3V 47	1	
C3047		ECUZ1H560JCN	C CHIP +-5% 50V 56P	1	
C3048		ECUZ1H181JCN	C CHIP +-5% 50V 180P	1	
C3049		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C3050		ECUZ1H680JCN	C CHIP +-5% 50V 68P	1	
C3051		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C3052		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C3054		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C3055		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C3056		ECUZ1H223ZFN	C CHIP +80%-20% 50V 0.022	1	
C3057		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C3058		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C3060		ECUZ1H121JCN	C CHIP +-5% 50V 120P	1	
C3061		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C3062		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C3064		ECUZ1H222KBN	C CHIP 50V 0.0022	1	
C3065		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C3066, 3067		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	2	
C3069		ECUZ1H150JCN	C CHIP +-5% 50V 15P	1	
C3070		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C3071		ECEA0JU471	ELECTROLYTIC 6.3V 470	1	
C3072		ECEA0JK101	ELECTROLYTIC 6.3V 100	1	
C3073		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C3075		ECUZ1H220JCN	C CHIP +-5% 50V 22P	1	
C3076		ECUZ1H121JCN	C CHIP +-5% 50V 120P	1	
C3078		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C3079		ECUZ1H101JCN	C CHIP +-5% 50V 100P	1	
C3201		ECEA0JK470	ELECTROLYTIC 6.3V 47	1	
C3202		ECEA1EK4R7	ELECTROLYTIC 25V 4.7	1	
C3203		ECUZ1H560JCN	C CHIP +-5% 50V 56P	1	
C3204		ECUZ1H101JCN	C CHIP +-5% 50V 100P	1	
C3205		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C3221		ECUZ1H102KBN	C CHIP 50V 0.001	1	
C3222		ECUZ1C104ZFN	C CHIP +80%-20% 16V 0.1	1	
C3223		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C3224		ECEA1HK2R2	ELECTROLYTIC 50V 2.2	1	
C3301		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C3302		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C3303		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C3304		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C3305		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C3306		ECUZ1H120JCN	C CHIP +-5% 50V 12P	1	
C3307		ECUZ1H220JCN	C CHIP +-5% 50V 22P	1	
C3308		ECUZ1H090CCN	C CHIP +-0.25P 50V 9P	1	
C3309		ECUZ1H181JCN	C CHIP +-5% 50V 180P	1	
C3310		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C3311		ECEA0JK470	ELECTROLYTIC 6.3V 47	1	
C3402, 3403		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	2	
C4002		ECUZ1H102KBN	C CHIP 50V 0.001	1	
C4003		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4005		ECUZ1H272KBN	C CHIP 50V 0.0027	1	
C4006		ECEA1HKR47	ELECTROLYTIC 50V 0.47	1	
C4007		ECEA0JK220	ELECTROLYTIC 6.3V 22	1	
C4008		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C4009		ECUZ1H822KBN	C CHIP 50V 0.0082	1	
C4010		ECUZ1E223KBN	C CHIP 25V 0.022	1	
C4012		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C4013		ECUZ1H103KBN	C CHIP 50V 0.01	1	
C4014		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4016		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C4017		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4019		ECEA1CK220	ELECTROLYTIC 16V 22	1	
C4102		ECHS1562JZ3	POLYESTER +-5% 100V 5600P	1	
C4103, 4104		ECUZ1H103KBN	C CHIP 50V 0.01	2	
C4106		ECEA1CK220	ELECTROLYTIC 16V 22	1	
C4281		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C4282, 4283		ECEA1CK100	ELECTROLYTIC 16V 10	2	
C4301, 4302		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	2	
C4351		ECEA1EK4R7	ELECTROLYTIC 25V 4.7	1	
C4352		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4353		ECEA1EK4R7	ELECTROLYTIC 25V 4.7	1	
C4354		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4355		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C4356		ECEA1CK220	ELECTROLYTIC 16V 22	1	
C6003, 6004		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	2	
C6005		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C6006		ECUZ1H101JCN	C CHIP +-5% 50V 100P	1	
C6007		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C6010		ECEA0JU471	ELECTROLYTIC 6.3V 470	1	
C6011		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C6015		ECUZ1H561KBN	C CHIP 50V 560P	1	
C6022		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C6023		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C6201		ECEA1EK4R7	ELECTROLYTIC 25V 4.7	1	
C6202		ECUZ1H102KBN	C CHIP 50V 0.001	1	
C6203		ECUZ1H103KBN	C CHIP 50V 0.01	1	
C6204		ECEA0JK330	ELECTROLYTIC 6.3V 33	1	
C6205		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C6206		ECUZ1H103KBN	C CHIP 50V 0.01	1	

Ref. No.		Part No.	Part Name & Description	Pcs/Set	Remarks
C6207		ECEA0JK470	ELECTROLYTIC 6.3V 47	1	
C6208		ECUZ1H470JCN	C CHIP +-5% 50V 47P	1	
C6209		ECUZ1H390JCN	C CHIP +-5% 50V 39P	1	
C6210		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C6211		ECQB1H393KF	POLYESTER 50V 0.039	1	
C6212		ECUZ1H151KN	C CHIP 50V 150P	1	
C6213		ECUZ1H182KBN	C CHIP 50V 0.0018	1	
C6214		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C6215, 6216		VCYR1C104MX	CERAMIC +-20% 16V 0.1	2	
C6217		ECUZ1H272KBN	C CHIP 50V 0.0027	1	
C6218		ECEA0JK220	ELECTROLYTIC 6.3V 22	1	
C6219, 6220		ECEA1HK2R2	ELECTROLYTIC 50V 2.2	2	
C6221		ECUZ1H272KBN	C CHIP 50V 0.0027	1	
C6222		ECEA0JK220	ELECTROLYTIC 6.3V 22	1	
C6223		ECUZ1H102KBN	C CHIP 50V 0.001	1	
C6225		ECEA0JK220	ELECTROLYTIC 6.3V 22	1	
C6226		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C6227		ECUZ1E473ZFN	C CHIP +80%-20% 25V 0.047	1	
C6228		ECEA0JK220	ELECTROLYTIC 6.3V 22	1	
C6229		ECUZ1H472KBN	C CHIP 50V 0.0047	1	
C6230		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C6231		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C7001		ECEA0JU101	ELECTROLYTIC 6.3V 100	1	
C7007		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C7008		ECA1CM221I	ELECTROLYTIC 16V 220	1	
C7010		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C7013		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C7016		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
			DELAY LINE		
DL3001		VLDS0049		1	
			COILS		
L3001		ELESN220KA	22	1	
L3002		ELESN680KA	68	1	
L3003		ELESN101KA	100	1	
L3004		ELESN390KA	39	1	
L3005		ELESN101KA	100	1	
L3006		ELESN220KA	22	1	
L3007		ELESN271KA	270	1	
L3008		ELESN330KA	33	1	
L3009		ELESN102KA	1M	1	
L3010		ELESN331KA	330	1	
L3011		ELESN180KA	18	1	
L3012		ELESN470KA	47	1	
L3014		ELESN470KA	47	1	
L3201		ELESN470KA	47	1	
L3261		ELESN101KA	100	1	
L3301		ELESN180KA	18	1	
L3302		ELESN101KA	100	1	
L4001		VLQS0030	15M	1	
L4101		VLQS005R471K	470	1	
L4351		ELESN101KA	100	1	
L6001, 6002		VLQS05R4R7K	4.7	2	
L7001, 7002		ELESN101KA	100	2	
			CRYSTAL OSCILLATOR		
X3001		VSXS0179		1	
X6201		VSXS0123		1	
			PIN HEADERS		
P1201		VJPS0645	9P	1	
P3001		VJPS0641	24P	1	
P4101		VJSS0644	2P	1	
P4102		VJPS0712	19P	1	
P6001		VJPS0712	19P	1	
P6201		VJPS0642	22P	1	
			SWITCHES		
SW6001		VSHS0051	SAFETY TAB SWITCH	1	
SW6002		ESE105SV1	CASSETTE UP/DOWN SWITCH	1	
SW7001		VSSS0142	SELECT SWITCH	1	
			TRANSFORMER		
T4101		EI070F0180		1	

(E2, E7, E11, E12)

Ref. No.		Part No.	Part Name & Description	Pcs/Set	Remarks
			PRINTED CIRCUIT BOARD ASSEMBLY		
E2	▲	VEPS04110A1	Hi-Fi AUDIO C.B.A.	1	
E7	▲	VEPS0914A1	MTS/SAP C.B.A.	1	
			MISCELLANEOUS		
JK300(E11)		VJHS0323	A/V JACK	1	
E12		VEQS0559	UHF/VHF TUNER/TV DEMODULATOR	1	
			UNIT		
	▲		**Hi-Fi AUDIO C.B.A.**		
			(F,G,H,I)		
			INTEGRATED CIRCUITS		
IC4202		UPC78L05J	IC BIPOLAR LINEAR +5V	1	
			REGULATOR		
			TRANSISTORS		
Q4201		2SD638(Q)		1	
Q4202		2SD601(R)	CHIP	1	
Q4203		UN2113	CHIP	1	
Q4204		2SD601(R)	CHIP	1	
			DIODES		
D4201		MA4091N-H	ZENER 9.1V	1	
D4202		1SS119		1	
			RESISTORS		
R4201		ERJ6GEYJ152V	MGF CHIP 1/10W 1.5K	1	
R4202	●	ERJ6GEY0R00V	MGF CHIP 1/10W 0	1	
R4203		ERJ6GEYJ152V	MGF CHIP 1/10W 1.5K	1	
R4204		ERJ6GEYJ682V	MGF CHIP 1/10W 6.8K	1	
R4205		EVND1AA00B14	VARIABLE +-30% 1/10W 10K	1	
R4206		ERJ6GEYJ391V	MGF CHIP 1/10W 390	1	
R4207, 4208		ERJ6GEYG332V	MGF CHIP +-2% 1/10W 3.3K	2	
R4209		ERJ6GEYG102V	MGF CHIP +-2% 1/10W 1K	1	
R4211		ERJ6GEYJ273V	MGF CHIP 1/10W 27K	1	
R4214		ERJ6GEYJ152V	MGF CHIP 1/10W 1.5K	1	
R4215		ERJ6GEYJ272V	MGF CHIP 1/10W 2.7K	1	
R4216		ERJ6GEYJ103V	MGF CHIP 1/10W 10K	1	
R4217		ERJ6GEYJ152V	MGF CHIP 1/10W 1.5K	1	
R4218		ERJ6GEYJ104V	MGF CHIP 1/10W 100K	1	
R4222		ERJ6GEYJ154V	MGF CHIP 1/10W 150K	1	
R4223		ERJ6GEYJ102V	MGF CHIP 1/10W 1K	1	
R4224		ERJ6GEYJ223V	MGF CHIP 1/10W 22K	1	
R4225		ERJ6GEYJ222V	MGF CHIP 1/10W 2.2K	1	
R4227		ERJ6GEYJ222V	MGF CHIP 1/10W 2.2K	1	
R4228		ERJ6GEYJ223V	MGF CHIP 1/10W 22K	1	
R4229		ERJ6GEYJ154V	MGF CHIP 1/10W 150K	1	
R4230		ERJ6GEYG222V	MGF CHIP +-2% 1/10W 2.2K	1	
R4231		ERJ6GEYG242V	MGF CHIP +-2% 1/10W 2.4K	1	
R4232		ERJ6GEYJ104V	MGF CHIP 1/10W 100K	1	
R4233-4235		ERJ6GEYJ223V	MGF CHIP 1/10W 22K	3	
R4236		ERJ6GEYJ331V	MGF CHIP 1/10W 330	1	
R4237		ERJ6GEYJ335V	MGF CHIP 1/10W 3.3M	1	
R4238		ERJ6GEYJ103V	MGF CHIP 1/10W 10K	1	
R4239		ERJ6GEYJ471V	MGF CHIP 1/10W 470	1	
R4240		ERJ6GEYJ102V	MGF CHIP 1/10W 1K	1	
R4241		ERJ6GEYJ225V	MGF CHIP 1/10W 2.2M	1	
R4242		ERJ6GEYJ102V	MGF CHIP 1/10W 1K	1	
R4244		ERJ6GEYJ154V	MGF CHIP 1/10W 150K	1	
R4245		ERJ6GEYJ683V	MGF CHIP 1/10W 68K	1	
R4246		ERJ6GEYJ333V	MGF CHIP 1/10W 33K	1	
R4247		ERJ6GEYG153V	MGF CHIP +-2% 1/10W 15K	1	
R4248, 4249		ERJ6GEYG333V	MGF CHIP +-2% 1/10W 33K	2	
R4250		ERJ6GEYG153V	MGF CHIP +-2% 1/10W 15K	1	
R4251		ERJ6GEYJ103V	MGF CHIP 1/10W 10K	1	
R4252		ERJ6GEYJ223V	MGF CHIP 1/10W 22K	1	
R4253		ERJ6GEYJ273V	MGF CHIP 1/10W 27K	1	
R4257		ERJ6GEYJ393V	MGF CHIP 1/10W 39K	1	
R4258		ERJ6GEYJ103V	MGF CHIP 1/10W 10K	1	
R4259		ERJ6GEYJ393V	MGF CHIP 1/10W 39K	1	
R4260		ERJ6GEYJ103V	MGF CHIP 1/10W 10K	1	
R4261		ERJ6GEYJ223V	MGF CHIP 1/10W 22K	1	

● MARK : 0 OHM RESISTOR
WHEN REPLACING, A WIRE CAN BE SUBSTITUTED FOR A 0 OHM RESISTOR.

(E18)

Ref. No.		Part No.	Part Name & Description	Pcs/ Set	Remarks
			CAPACITORS		
C4201		ECUV1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C4202, 4203		VCUS0BE104ZF	C CHIP +80%-20% 25V 0.1	2	
C4204-4206		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	3	
C4207		ECUV1H221JCN	C CHIP +-5% 50V 220P	1	
C4208-4211		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	4	
C4212		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4213, 4214		ECEA0JK220	ELECTROLYTIC 6.3V 22	2	
C4215		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C4216		VCUS0BE104ZF	C CHIP +80%-20% 25V 0.1	1	
C4217		ECEA1HK2R2	ELECTROLYTIC 50V 2.2	1	
C4218		ECQB1H103JH	POLYESTER +-5% 50V 0.01	1	
C4219		ECQB1H222JH	POLYESTER +-5% 50V 0.0022	1	
C4220		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4221		ECQB1H222JH	POLYESTER +-5% 50V 0.0022	1	
C4222		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4223		ECQB1H103JH	POLYESTER +-5% 50V 0.01	1	
C4224		ECEA1HK2R2	ELECTROLYTIC 50V 2.2	1	
C4225		ECQB1H103JH	POLYESTER +-5% 50V 0.01	1	
C4226		ECEA0JK470	ELECTROLYTIC 6.3V 47	1	
C4227		ECEA1EKN4R7	ELECTROLYTIC 25V 4.7	1	
C4228		ECQB1H103JH	POLYESTER +-5% 50V 0.01	1	
C4229		ECEA0JK470	ELECTROLYTIC 6.3V 47	1	
C4230		ECEA1EKN4R7	ELECTROLYTIC 25V 4.7	1	
C4231		ECEA1EK4R7	ELECTROLYTIC 25V 4.7	1	
C4232		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C4233		NCUV1H682KBN	C CHIP 50V 0.0068	1	
C4234, 4235		VCUS0BE104ZF	C CHIP +80%-20% 25V 0.1	2	
C4236, 4237		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	2	
C4238		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4239		ECEA0JK470	ELECTROLYTIC 6.3V 47	1	
C4240		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C4241, 4242		ECEA0JK220	ELECTROLYTIC 6.3V 22	2	
C4243, 4244		ECEA1CK100	ELECTROLYTIC 16V 10	2	
C4246-4249		ECEA1CK100	ELECTROLYTIC 16V 10	4	
			FILTERS		
FL4201		VLFS0208		1	
			COILS		
L4201		VLQS0030	15M	1	
			PIN HEADERS		
P4201, 4202		VJHS0297	7P	2	
P4203		VJHS0296	6P	1	
P4204		VJHS0294	4P	1	
P4205		VJHS0296	6P	1	
			MISCELLANEOUS		
E18		VMAS2067	SUPPORT ANGLE	1	
	▲		**MTS/SAP C.B.A.**		
			(F)		
			TRANSISTORS		
Q9001		2SD601(Q)	CHIP	1	
			DIODES		
D9001		MA4091N-M	ZENER 9.1V	1	
D9002		1SS119		1	
			RESISTORS		
R9006		ERJ6GEYJ222V	MGF CHIP 1/10W 2.2K	1	
R9007		ERJ6GEYJ331V	MGF CHIP 1/10W 330	1	
R9010		ERJ6GEYJ183V	MGF CHIP 1/10W 18K	1	
R9015		ERJ6GEYJ102V	MGF CHIP 1/10W 1K	1	
R9016		ERJ6GEYJ112V	MGF CHIP 1/10W 1.1K	1	
R9017		ERJ6GEYJ331V	MGF CHIP 1/10W 330	1	
R9018		ERJ6GEYJ512V	MGF CHIP 1/10W 5.1K	1	
R9019		ERJ6GEYJ134V	MGF CHIP 1/10W 130K	1	
R9020, 9021		ERJ6GEYJ471V	MGF CHIP 1/10W 470	2	
R9022		ERJ6GEYJ562V	MGF CHIP 1/10W 5.6K	1	

(E28)

Ref. No.		Part No.	Part Name & Description	Pcs/ Set	Remarks
R9023, 9024		ERJ6GEYJ153V	MGF CHIP 1/10W 15K	2	
R9025		ERJ6GEYJ154V	MGF CHIP 1/10W 150K	1	
R9027		ERJ6GEYJ563V	MGF CHIP 1/10W 56K	1	
R9033		ERJ6GEYJ564V	MGF CHIP 1/10W 560K	1	
R9035		ERJ6GEYJ105V	MGF CHIP 1/10W 1M	1	
			CAPACITORS		
C9001		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C9002		ECEA1HKR68	ELECTROLYTIC 50V 0.68	1	
C9003		ECEA1HK3R3	ELECTROLYTIC 50V 3.3	1	
C9004, 9005		VCUS0BE104ZF	C CHIP +80%-20% 25V 0.1	2	
C9006		ECEA0JK220	ELECTROLYTIC 6.3V 22	1	
C9007, 9008		ECEA1EK4R7	ELECTROLYTIC 25V 4.7	2	
C9009		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C9010		ECUZ1H103KBN	C CHIP 50V 0.01	1	
C9011		ECEA1EK4R7	ELECTROLYTIC 25V 4.7	1	
C9012		VCUS0BE104ZF	C CHIP +80%-20% 25V 0.1	1	
C9013		ECUV1H102KBN	C CHIP 50V 0.001	1	
C9014		ECUZ1H103KBN	C CHIP 50V 0.01	1	
C9015		ECEA1HKR47	ELECTROLYTIC 50V 0.47	1	
C9016		ECEA1HKR33	ELECTROLYTIC 50V 0.33	1	
C9018		ECEA1EK4R7	ELECTROLYTIC 25V 4.7	1	
C9019		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C9020		ECEA1CK220	ELECTROLYTIC 16V 22	1	
C9021, 9022		ECEA1EK4R7	ELECTROLYTIC 25V 4.7	2	
C9023		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C9024		ECEA1EKN4R7	ELECTROLYTIC 25V 4.7	1	
			PIN HEADERS		
P9001, 9002		VJHS0296	6P	2	
			MISCELLANEOUS		
E28		VMAS1912	P.C.B. SUPPORT ANGLE	1	
			MTS/SAP C.B.A.		
	▲		**(G,H,I)**		
			TRANSISTORS		
Q9001		2SD601(Q)	CHIP	1	
			RESISTORS		
R9007		ERJ6GEYJ122V	MGF CHIP 1/10W 1.2K	1	
R9008		ERJ6GEYJ472V	MGF CHIP 1/10W 4.7K	1	
R9014		ERJ6GEYJ303V	MGF CHIP 1/10W 30K	1	
R9015		ERJ6GEYJ102V	MGF CHIP 1/10W 1K	1	
R9017		ERJ6GEYJ331V	MGF CHIP 1/10W 330	1	
R9018		ERJ6GEYG512V	MGF CHIP +-2% 1/10W 5.1K	1	
R9019		ERJ6GEYJ302V	MGF CHIP 1/10W 3K	1	
R9020, 9021		ERJ6GEYJ471V	MGF CHIP 1/10W 470	2	
R9022-9024		ERJ6GEYJ562V	MGF CHIP 1/10W 5.6K	3	
R9025		ERJ6GEYJ224V	MGF CHIP 1/10W 220K	1	
R9027		ERJ6GEYJ683V	MGF CHIP 1/10W 68K	1	
R9028		ERJ6GEYG113V	MGF CHIP +-2% 1/10W 11K	1	
R9029		ERJ6GEYG103V	MGF CHIP +-2% 1/10W 10K	1	
R9033		ERJ6GEYJ102V	MGF CHIP 1/10W 1K	1	
R9034		ERJ6GEYJ823V	MGF CHIP 1/10W 82K	1	
			CAPACITORS		
C9001		ECUV1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C9002		ECEA1EK3R3	ELECTROLYTIC 25V 3.3	1	
C9003		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C9004		VCUS0BE104ZF	C CHIP +80%-20% 25V 0.1	1	
C9005, 9006		ECEA1HK010	ELECTROLYTIC 50V 1	2	
C9007		VCUS0BE104ZF	C CHIP +80%-20% 25V 0.1	1	
C9008		ECEA1HK2R2	ELECTROLYTIC 50V 2.2	1	
C9009, 9010		VCUS0BE104ZF	C CHIP +80%-20% 25V 0.1	2	
C9011		ECEA0JK470	ELECTROLYTIC 6.3V 47	1	
C9012		ECEA1HKR47	ELECTROLYTIC 50V 0.47	1	
C9013		ECUV1E473KBN	C CHIP 25V 0.047	1	
C9014		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C9015		ECEA1HKR68	ELECTROLYTIC 50V 0.68	1	
C9016		ECEA1EK4R7	ELECTROLYTIC 25V 4.7	1	
C9017		VCUS0BE104ZF	C CHIP +80%-20% 25V 0.1	1	

(E20, E28)

Ref. No.		Part No.	Part Name & Description	Pcs/ Set	Remarks
C9018		ECEA1CK100	ELECTROLYTIC 16V 10	1	
C9019		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C9020		ECEA1CK220	ELECTROLYTIC 16V 22	1	
			PIN HEADERS		
P9001,9002		VJHS0296	6P	2	
			MISCELLANEOUS		
E28		VMAS1912	P.C.B. SUPPORT ANGLE	1	
	■		**POWER SUPPLY ASS'Y**		
			INTEGRATED CIRCUITS		
IC1001	⚠	0N3131-R•KT	IC BIPOLAR LINEAR ERROR V.DET	1	
	⚠	OR 0N3161-0R	IC BIPOLAR LINEAR ERROR V.DET		
			TRANSISTORS		
Q1001	⚠	2SC4418LF608		1	
	⚠	OR 2SC4533LP			
	⚠	OR 2SC4662LF608			
		(A, B, C, D, E)			
(E20)	⚠	2SC3870			
	⚠	OR 2SC4130LF608			
		(F, G, H, I)			
Q1002	⚠	2SD1458		1	
Q1003		2SC1684(Q)		1	
Q1004		2SA564(Q)		1	
Q1005		2SA564(R)		1	
			DIODES		
D1001	⚠	S1WBA40		1	
D1002		ERA18-04		1	
D1003,1004		1SS119		2	
D1005		MA188-TA5		1	
D1006	⚠	ERB32-01L3		1	
	⚠	OR RU2YXLFC1			
		(A, B, C, D, E)			
	⚠	ERC30-01L3			
	⚠	OR RU3YXLFC1			
		(F, G, H, I)			
D1007		MA188-TA5		1	
D1008	⚠	EK13		1	
	⚠	OR EK13F7			
	⚠	OR ERB83-004			
	⚠	OR ERB83-004G1			
		(A, B, C, D, E)			
	⚠	ERB81-004			
	⚠	OR RK14			
		(F, G, H, I)			
D1009	⚠	MA178		1	
		(A, B, C, D, E)			
	⚠	EU2YXLFH5K			
		(F, G, H, I)			
D1011		MA4051NH	ZENER 5.1V	1	
D1012		MA858		1	
D1013		1SS119		1	
D1014		MA165		1	
		(F, G, H, I)			
D1015	⚠	MA2180	ZENER 18V	1	
	⚠	OR RD18FB	ZENER 18V		
D1016	⚠	MA165-TA5.VT		1	
	⚠	OR 1SS119			
		(A, B, C, D, E)			
			RESISTORS		
R1001	⚠	VRESC2TK275	+-10% 1/2W 2.7M	1	
	⚠	OR VRESC2TK275C	+-10% 1/2W 2.7M		
R1002		VRESE2TJ124	1/2W 120K	1	
R1003		VRESE2TJ154	1/2W 150K	1	
R1004	⚠	ERG2SJM333H	METAL OXIDE 2W 33K	1	
	⚠	OR ERG2SJ333H	METAL OXIDE 2W 33K		
	⚠	OR KRG2SJ333H	METAL OXIDE 2W 33K		
	⚠	OR TRG2SJ333H	METAL OXIDE 2W 33K		

Ref. No.		Part No.	Part Name & Description	Pcs/ Set	Remarks
R1005	⚠	ERG1SJM820P	METAL OXIDE 1W 82	1	
	⚠	OR ERG1SJ820P	METAL OXIDE 1W 82		
	⚠	OR KRG1SJ820P	METAL OXIDE 1W 82		
	⚠	OR TRG1SJ820P	METAL OXIDE 1W 82		
		(A, B, C, D, E)			
	⚠	ERG1SJM101P	METAL OXIDE 1W 100		
	⚠	OR ERG1SJ101P	METAL OXIDE 1W 100		
	⚠	OR KRG1SJ101P	METAL OXIDE 1W 100		
	⚠	OR TRG1SJ101P	METAL OXIDE 1W 100		
		(F, G, H, I)			
R1006		ERDS2TJ222	2.2K	1	
R1007		ERDS2TJ331	330	1	
R1008		ERDS2TJ392	3.9K	1	
R1010,1011	⚠	ERD25FJ100P	10	2	
	⚠	OR ERD25FPJ100P	10		
	⚠	OR KRD25FJ100P	10		
	⚠	OR VRESF4FJ100P	10		
R1014,1015		ERDS2TJ221	220	2	
R1016		ERDS2TJ562	5.6K	1	
R1017		ERDS2TJ103	10K	1	
R1018		ERDS2TJ183	18K	1	
R1019		ERDS2TJ392	3.9K	1	
R1020		ERDS2TJ682	6.8K	1	
R1022		ERDS2TJ221	220	1	
R1023	⚠	ERX1SJMR68P	METAL FILM 1W 0.68	1	
	⚠	OR ERX1SJR68P	METAL FILM 1W 0.68		
	⚠	OR KRX1SJR68P	METAL FILM 1W 0.68		
	⚠	OR TRX1SJR68P	METAL FILM 1W 0.68		
		(A, B, C, D, E)			
	⚠	ERX1SJMR22P	METAL FILM		
	⚠	OR ERX1SJR22P	METAL FILM 1W 0.22		
	⚠	OR KRX1SJR22P	METAL FILM 1W 0.22		
	⚠	OR TRX1SJR22P	METAL FILM 1W 0.22		
		(F, G, H, I)			
			CAPACITORS		
C1001	⚠	ECKDRS103ZV	CERAMIC +80%-20% 125V 0.01	1	
	⚠	OR VCKS0004	CERAMIC +80%-20% 125V 0.01		
	⚠	OR VCKS0012	CERAMIC +80%-20% 125V 0.01		
	⚠	OR VCKS0012C	CERAMIC +80%-20% 125V 0.01		
C1002	⚠	ECKCNS332ME	CERAMIC +-20% 125V 0.0033	1	
	⚠	OR ECKDNS332ME	CERAMIC +-20% 125V 0.0033		
	⚠	OR ECKDRS332MED	CERAMIC +-20% 125V 0.0033		
	⚠	OR TCKDNS332MES	CERAMIC +-20% 125V 0.0033		
	⚠	OR VCKS0038	CERAMIC +-20% 125V 0.0033		
	⚠	OR VCKS0038CF	CERAMIC +-20% 125V 0.0033		
C1003	⚠	ECKCNS332ME	CERAMIC +-20% 125V 0.0033	1	
	⚠	OR ECKDNS332ME	CERAMIC +-20% 125V 0.0033		
	⚠	OR ECKDRS332MED	CERAMIC +-20% 125V 0.0033		
	⚠	OR TCKDNS332MES	CERAMIC +-20% 125V 0.0033		
	⚠	OR VCKS0009	CERAMIC +-20% 125V 0.0033		
	⚠	OR VCKS0009C	CERAMIC +-20% 125V 0.0033		
	⚠	OR VCKS0038	CERAMIC +-20% 125V 0.0033		
	⚠	OR VCKS0038CF	CERAMIC +-20% 125V 0.0033		
C1004	⚠	ECEA2DU820YE	ELECTROLYTIC 200V 82	1	
	⚠	OR SCEA2DU820XE	ELECTROLYTIC 200V 82		
		(A, B, C, D, E)			
	⚠	ECEA2DU121YE	ELECTROLYTIC 200V 120		
		(F, G, H, I)			
C1005		MCEA2DG4R7Y	ELECTROLYTIC 200V 4.7	1	
C1006		ECKW2H221KB5	CERAMIC 500V 220P	1	
C1007,1008		ECKW1H472KB5	CERAMIC 50V 0.0047	2	
C1009		ECKW1H332KB5	CERAMIC 50V 0.0033	1	
C1010		VCYSARH102KB	CERAMIC 50V 0.001	1	
C1011	⚠	ECEA1HU4R7B	ELECTROLYTIC 50V 4.7	1	
	⚠	OR QCEA1HU4R7B	ELECTROLYTIC 50V 4.7		
	⚠	OR SCEA1HU4R7B	ELECTROLYTIC 50V 4.7		
C1012,1013	⚠	ECEA1PEE331B	ELECTROLYTIC 18V 330	2	
	⚠	OR ECEA1PEE331E	ELECTROLYTIC 18V 330		
	⚠	OR SCEA1PFE331B	ELECTROLYTIC 18V 330		
	⚠	OR SCEA1PFE331E	ELECTROLYTIC 18V 330		
	⚠	OR VCESN1P331B	ELECTROLYTIC 18V 330		
C1014	⚠	ECEA1HGE4R7B	ELECTROLYTIC 50V 4.7	1	
	⚠	OR SCEA1HGE4R7B	ELECTROLYTIC 50V 4.7		
		(A, B, C, D, E)			
	⚠	ECEA1HGE100B	ELECTROLYTIC 50V 10		
	⚠	OR SCEA1HGE100B	ELECTROLYTIC 50V 10		
		(F, G, H, I)			

(E13, E14, E15, E16, E33, E34, E35, E57)

Ref. No.		Part No.	Part Name & Description	Pcs/ Set	Remarks
C1016	⚠	ECEA0JEE331B	ELECTROLYTIC 6.3V 330	1	
	⚠	OR ECEA0JEE331E	ELECTROLYTIC 6.3V 330		
	⚠	OR SCEA0JFE331B	ELECTROLYTIC 6.3V 330		
	⚠	OR SCEA0JFE331E	ELECTROLYTIC 6.3V 330		
C1017	⚠	ECA0JM102B	ELECTROLYTIC 6.3V 1000	1	
	⚠	OR ECEA0JU102	ELECTROLYTIC 6.3V 1000		
	⚠	OR ECEA0JU102C	ELECTROLYTIC 6.3V 1000		
	⚠	OR MCEA0JM102B	ELECTROLYTIC 6.3V 1000		
	⚠	OR SCEA0JUE102X	ELECTROLYTIC 6.3V 1000		
		(A, B, C, D, E)			
	⚠	ECEA0JFE102X	ELECTROLYTIC 6.3V 1000		
	⚠	OR SCEA0JFE102C	ELECTROLYTIC 6.3V 1000		
	⚠	OR SCEA0JFE102X	ELECTROLYTIC 6.3V 1000		
		(F, G, H, I)			
C1018		MCYR1C104MX	CERAMIC +-20% 16V 0.1	1	
C1019		VCESN0J101B	ELECTROLYTIC 6.3V 100	1	
C1021		ECEA1HKG010	ELECTROLYTIC 50V 1	1	
C1023		VCKW1H103ZF5	CERAMIC +80%-20% 50V 0.01	1	
C1028	⚠	ECKDNS101MB	CERAMIC +-20% 125V 100P	1	
	⚠	OR ECKDRS101MB	CERAMIC +-20% 125V 100P		
	⚠	OR VCKS0026	CERAMIC 125V 100P		
	⚠	OR VCKS0059	CERAMIC 125V 100P		
C1030		VCYR1E333KX	CERAMIC 25V 0.033	1	
			COILS		
L1001	⚠	ELF18D290A	29	1	
	⚠	OR VLQS0039	29		
		(A, B, C, D, E)			
	⚠	ELF18D290A	29		
		(F, G, H, I)			
L1002		VLQS7A220M	+-20% 22	1	
		(A, B, C, D, E)			
		VLQS9A220M	+-20% 22		
		(F, G, H, I)			
L1003		VLQS7A9R0M	+-20% 9	1	
L1006		VLPS0005A	22	1	
			PIN HEADERS		
P1001		VJSS0645	9P	1	
			FUSE & PROTECTOR		
F1001	⚠	VSFS0003A16	FUSE 125V 1.6A	1	
	⚠	OR VSFS0012A16	FUSE 125V 1.6A		
	⚠	OR XBA1C16NU100	FUSE 125V 1.6A		
PR1001	⚠	ICP-F38	IC PROTECTOR 1.5A	1	
	⚠	OR UN10015	IC PROTECTOR 1.5A		
			TRANSFORMER		
T1001	⚠	ETE27K1AY		1	
	⚠	OR ETE27K1AY-K			
	⚠	OR ETS28K390A			
			MISCELLANEOUS		
E13	⚠	VJAS0153	AC CORD	1	
	⚠	OR VJAS0154	AC CORD		
E15		VJSS0164	FUSE HOLDER	2	
E16		VSCS1982	SHIELD CASE -BODY	1	
		(A, B, C, D, E)			
		VSCS1982-1	SHIELD CASE -BODY		
		(F, G, H, I)			
E14		VSCS1984	SHIELD CASE -TOP	1	
E33		VSCS1995	HEAT SINK PLATE	1	
		(F, G, H, I)			
E34		XNG3	M3 NUT	1	
		(F, G, H, I)			
E35		XYN3+F10S	SCREW WITH WASHER 3X10	1	
		(F, G, H, I)			
E57		VXAS1689	SHIELD PLATE UNIT	1	
		(A, B, C, D, E)			

Ref. No.		Part No.	Part Name & Description	Pcs/ Set	Remarks
	■		**OPERATION I C.B.A.**		
			(A,D,H)		
			INTEGRATED CIRCUITS		
IC7161		UPC4570G2-T1	IC BIPOLAR LINEAR AMP	1	
		(D)			
IC7501		T47C212A3322	IC MOS LOGIC INDICATOR PANEL	1	E.S.D.
			CONTROL		
			TRANSISTORS		
Q7502		UN2214	CHIP	1	
Q7509		UN2115	CHIP	1	
			DIODES		
D7151, 7152		MA4051-M	ZENER 5.1V	2	
		(D)			
D7161		MA4068-M	ZENER 6.8V	1	
		(D)			
D7503		MA4051-M	ZENER 5.1V	1	
			RESISTORS		
R7151		ERJ6GEYJ750Z	MGF CHIP 1/10W 75	1	
		(D)			
R7162		ERJ6GEYJ562Z	MGF CHIP 1/10W 5.6K	1	
		(D)			
R7163, 7164		ERJ6GEYJ473Z	MGF CHIP 1/10W 47K	2	
		(D)			
R7165		ERDS2TJ472	4.7K	1	
		(D)			
R7502		ERJ6GEYJ223Z	MGF CHIP 1/10W 22K	1	
R7507		ERJ6GEYJ102Z	MGF CHIP 1/10W 1K	1	
R7508		ERJ6GEYJ223Z	MGF CHIP 1/10W 22K	1	
R7509, 7510		ERJ6GEYJ101Z	MGF CHIP 1/10W 100	2	
R7511		ERJ6GEYJ102Z	MGF CHIP 1/10W 1K	1	
R7512		ERJ6GEYJ101Z	MGF CHIP 1/10W 100	1	
R7513		ERJ6GEYJ102Z	MGF CHIP 1/10W 1K	1	
R7514, 7515		ERJ6GEYJ101Z	MGF CHIP 1/10W 100	2	
R7516, 7517		ERJ6GEYJ223Z	MGF CHIP 1/10W 22K	2	
R7518		ERJ6GEYJ473Z	MGF CHIP 1/10W 47K	1	
R7519		ERDS2TJ820	82	1	
R7520		ERDS2TJ750	75	1	
R7529		ERDS2TJ750	75	1	
R7530		ERJ6GEYJ470Z	MGF CHIP 1/10W 47	1	
R7801		ERJ6GEYJ392Z	MGF CHIP 1/10W 3.9K	1	
		(H)			
R7802		ERJ6GEYJ122Z	MGF CHIP 1/10W 1.2K	1	
		(H)			
			CAPACITORS		
C7161		ECEA1CK100	ELECTROLYTIC 16V 10	1	
		(D)			
C7162, 7163		ECUZ1H103KBN	C CHIP 50V 0.01	2	
		(D)			
C7501		ECEA0JK470	ELECTROLYTIC 6.3V 47	1	
C7502		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C7503		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C7504		ECUZ1H101JCN	C CHIP +-5% 50V 100P	1	
C7505		ECEA0JK470	ELECTROLYTIC 6.3V 47	1	
			CRYSTAL OSCILLATOR		
X7501		EF0EC6004T4		1	
			PIN HEADERS		
P7501		VJSS0763	19P	1	
		(A)			
		VJSS0761	19P		
		(D)			
		VJSS0762	19P		
		(H)			
			SWITCHES		
SW7501		EV021405R	PUSH SWITCH	1	
		(H)			

(E19, E37, E38, E44)

Ref. No.		Part No.	Part Name & Description	Pcs/ Set	Remarks
SW7502		EVQ21405R	PUSH SWITCH	1	
SW7504-7511		EVQ21405R	PUSH SWITCH	8	
			MISCELLANEOUS		
DP7501		VSZS0108	DISPLAY TUBE	1	
JK7151		VJHS0277	FRONT AV JACK	1	
		(D)			
E19		SPS-420-6-N	IR WIRELESS RECEIVING DETECTOR	1	
			UNIT		
E38		VGMS0498	DISPLAY TUBE HOLDER -L	1	
E37		VGMS0499	DISPLAY TUBE HOLDER -R	1	
E44		VJRS0093	CONNECTION PIECE 19P	1	
		(A)			
		VJRS0091	CONNECTION PIECE 19P		
		(D)			
		VJRS0092	CONNECTION PIECE 19P		
		(H)			
	■		**OPERATION I C.B.A.**		
			(B,C,F,G)		
			INTEGRATED CIRCUITS		
IC7501		T47C212A3322	IC MOS LOGIC INDICATOR PANEL	1	E. S. D.
			CONTROL		
			TRANSISTORS		
Q7502		UN2214	CHIP	1	
Q7509		UN2115	CHIP	1	
			DIODES		
D7503		MA4051-M	ZENER 5. 1V	1	
			RESISTORS		
R7502		ERJ6GEYJ223Z	MGF CHIP 1/10W 22K	1	
R7507		ERJ6GEYJ102Z	MGF CHIP 1/10W 1K	1	
R7508		ERJ6GEYJ223Z	MGF CHIP 1/10W 22K	1	
R7509, 7510		ERJ6GEYJ101Z	MGF CHIP 1/10W 100	2	
R7511		ERJ6GEYJ102Z	MGF CHIP 1/10W 1K	1	
R7512		ERJ6GEYJ101Z	MGF CHIP 1/10W 100	1	
R7513		ERJ6GEYJ102Z	MGF CHIP 1/10W 1K	1	
R7514, 7515		ERJ6GEYJ101Z	MGF CHIP 1/10W 100	2	
R7516, 7517		ERJ6GEYJ223Z	MGF CHIP 1/10W 22K	2	
R7518		ERJ6GEYJ473Z	MGF CHIP 1/10W 47K	1	
R7519		ERDS2TJ820	82	1	
R7520		ERDS2TJ750	75	1	
R7529		ERDS2TJ750	75	1	
R7801		ERJ6GEYJ392Z	MGF CHIP 1/10W 3. 9K	1	
		(F, G)			
R7802		ERJ6GEYJ122Z	MGF CHIP 1/10W 1. 2K	1	
		(F, G)			
			CAPACITORS		
C7501		ECEA0JK470	ELECTROLYTIC 6. 3V 47	1	
C7502		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0. 1	1	
C7503		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0. 01	1	
C7504		ECUZ1H101JCN	C CHIP +-5% 50V 100P	1	
			CRYSTAL OSCILLATOR		
X7501		EF0EC6004T4		1	
			PIN HEADERS		
P7501		VJSS0763	19P	1	
		(B, C)			
		VJSS0762	19P		
		(F, G)			
			SWITCHES		
SW7501		EVQQS205K		1	
		(F, G)			

(E19, E37, E38, E44)

Ref. No.		Part No.	Part Name & Description	Pcs/ Set	Remarks
SW7502		EVQQS205K		1	
SW7504-7511		EVQQS205K		8	
			MISCELLANEOUS		
DP7501		VSZS0108	DISPLAY TUBE	1	
E19		SPS-420-6	IR WIRELESS RECEIVING DETECTOR	1	
			UNIT		
E38		VGMS0496	DISPLAY TUBE HOLDER -L	1	
E37		VGMS0497	DISPLAY TUBE HOLDER -R	1	
E44		VJRS0093	CONNECTION PIECE 19P	1	
		(B, C)			
		VJRS0092	CONNECTION PIECE 19P		
		(F, G)			
	■		**TIMER/OPERATION I C.B.A.**		
			(E)		
			INTEGRATED CIRCUITS		
IC7161		UPC4570G2-T1	IC BIPOLAR LINEAR AMP	1	
IC7501	○	D75218CW-026	IC MOS LOGIC TIMER/DISPLAY	1	E. S. D.
			CONTROLLER		
IC7502		MN1280-L	IC MOS LOGIC RESET SIGNAL OUT	1	E. S. D.
			DIODES		
D7151, 7152		MA4051-M	ZENER 5. 1V	2	
D7520-7524		MA165		5	
D7527		MA4091N-M	ZENER 9. 1V	1	
D7528		MA4051-M	ZENER 5. 1V	1	
			RESISTORS		
R7151		ERJ6GEYJ750Z	MGF CHIP 1/10W 75	1	
R7162		ERJ6GEYJ562Z	MGF CHIP 1/10W 5. 6K	1	
R7163, 7164		ERJ6GEYJ473Z	MGF CHIP 1/10W 47K	2	
R7501-7508		ERJ6GEYJ223Z	MGF CHIP 1/10W 22K	8	
R7509-7513		ERJ6GEYJ102Z	MGF CHIP 1/10W 1K	5	
R7514-7518		ERJ6GEYJ101Z	MGF CHIP 1/10W 100	5	
R7520, 7521		ERJ6GEYJ102Z	MGF CHIP 1/10W 1K	2	
R7523		ERJ6GEYJ222Z	MGF CHIP 1/10W 2. 2K	1	
R7526		ERJ6GEYJ102Z	MGF CHIP 1/10W 1K	1	
R7527		ERJ6GEYJ223Z	MGF CHIP 1/10W 22K	1	
R7528-7534		ERJ6GEYJ102Z	MGF CHIP 1/10W 1K	7	
R7536-7539		ERJ6GEYJ102Z	MGF CHIP 1/10W 1K	4	
R7540, 7541		ERJ6GEYJ101Z	MGF CHIP 1/10W 100	2	
R7542		ERJ6GEYJ683Z	MGF CHIP 1/10W 68K	1	
R7543		ERJ6GEYJ473Z	MGF CHIP 1/10W 47K	1	
R7547		ERDS2TJ820	82	1	
R7548		ERDS2TJ750	75	1	
R7550		ERDS2TJ750	75	1	
			CAPACITORS		
C7162, 7163		ECUZ1H103KBN	C CHIP 50V 0. 01	2	
C7507, 7508		ECUZ1H100DCN	C CHIP +-0. 5P 50V 10P	2	
C7512-7514		ECUZ1H103KBN	C CHIP 50V 0. 01	3	
C7515		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0. 1	1	
C7516		ECEA0JK101	ELECTROLYTIC 6. 3V 100	1	
C7517		ECUZ1H103KBN	C CHIP 50V 0. 01	1	
C7518, 7519		ECUZ1H101JCN	C CHIP +-5% 50V 100P	2	
C7523		ECUZ1H102KBN	C CHIP 50V 0. 001	1	
			CRYSTAL OSCILLATOR		
X7501		VSXS0044		1	
			PIN HEADERS		
P7501, 7502		VJSS0761	19P	2	
			SWITCHES		
SW7502-7506		EVQ21405R	PUSH SWITCH	5	
SW7509-7512		EVQ21405R	PUSH SWITCH	4	

○ MARK : THE MANUFACTURING PART NUMBER IS UPD75218CW-026: HOWEVER, TO ORDER THE PART, USE SERVICE ORDER PART NUMBER D75218CW-026.

(E19, E37, E38, E44)

Ref. No.		Part No.	Part Name & Description	Pcs/ Set	Remarks
			MISCELLANEOUS		
DP7501		VSZS0108	DISPLAY TUBE	1	
E19		SPS-420-6	IR WIRELESS RECEIVING DETECTOR	1	
			UNIT		
E38		VGMS0498	DISPLAY TUBE HOLDER -L	1	
E37		VGMS0499	DISPLAY TUBE HOLDER -R	1	
E44		VJRS0091	CONNECTION PIECE 19P	2	
	■		**TIMER/OPERATION I C.B.A.**		
			(I)		
			INTEGRATED CIRCUITS		
IC7161		UPC4570G2-T1	IC BIPOLAR LINEAR AMP	1	
IC7501	○	D75218CW-026	IC MOS LOGIC TIMER/DISPLAY	1	E. S. D.
			CONTROLLER		
IC7502		MN1280-L	IC MOS LOGIC RESET SIGNAL OUT	1	E. S. D.
			TRANSISTORS		
07503, 7504		2SD601 (0)	CHIP	2	
07801		XN1213	COMPLEX COMPONENT SI NPN CHIP	1	
			DIODES		
D7151, 7152		MA4051-M	ZENER 5. 1V	2	
D7502		MA165		1	
D7514		MA165		1	
D7518-7524		MA165		7	
D7527		MA4091N-M	ZENER 9. 1V	1	
D7528		MA4051-M	ZENER 5. 1V	1	
			RESISTORS		
R7151		ERJ6GEYJ750Z	MGF CHIP 1/10W 75	1	
R7161, 7162		ERJ6GEYJ562Z	MGF CHIP 1/10W 5. 6K	2	
R7163, 7164		ERJ6GEYJ473Z	MGF CHIP 1/10W 47K	2	
R7501-7508		ERJ6GEYJ223Z	MGF CHIP 1/10W 22K	8	
R7509-7513		ERJ6GEYJ102Z	MGF CHIP 1/10W 1K	5	
R7514-7518		ERJ6GEYJ101Z	MGF CHIP 1/10W 100	5	
R7520, 7521		ERJ6GEYJ102Z	MGF CHIP 1/10W 1K	2	
R7523		ERJ6GEYJ222Z	MGF CHIP 1/10W 2. 2K	1	
R7524, 7525		ERJ6GEYJ101Z	MGF CHIP 1/10W 100	2	
R7526		ERJ6GEYJ102Z	MGF CHIP 1/10W 1K	1	
R7527		ERJ6GEYJ223Z	MGF CHIP 1/10W 22K	1	
R7528-7534		ERJ6GEYJ102Z	MGF CHIP 1/10W 1K	7	
R7536-7539		ERJ6GEYJ102Z	MGF CHIP 1/10W 1K	4	
R7540, 7541		ERJ6GEYJ101Z	MGF CHIP 1/10W 100	2	
R7542		ERJ6GEYJ683Z	MGF CHIP 1/10W 68K	1	
R7543		ERJ6GEYJ473Z	MGF CHIP 1/10W 47K	1	
R7547, 7548		ERDS2TJ180	18	2	
R7801		ERJ6GEYJ101Z	MGF CHIP 1/10W 100	1	
R7802		ERJ6GEYJ122Z	MGF CHIP 1/10W 1. 2K	1	
R7803		ERJ6GEYJ392Z	MGF CHIP 1/10W 3. 9K	1	
			CAPACITORS		
C7162, 7163		ECUZ1H103KBN	C CHIP 50V 0. 01	2	
C7507, 7508		ECUZ1H100DCN	C CHIP +-0. 5P 50V 10P	2	
C7512-7514		ECUZ1H103KBN	C CHIP 50V 0. 01	3	
C7515		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0. 1	1	
C7516		ECEA0JK101	ELECTROLYTIC 6. 3V 100	1	
C7517		ECUZ1H103KBN	C CHIP 50V 0. 01	1	
C7518, 7519		ECUZ1H101JCN	C CHIP +-5% 50V 100P	2	
C7523		ECUZ1H102KBN	C CHIP 50V 0. 001	1	
			CRYSTAL OSCILLATOR		
X7501		VSXS0044		1	
			PIN HEADERS		
P7501, 7502		VJSS0761	19P	2	
			SWITCHES		
SW7502-7506		EVQ21405R	PUSH SWITCH	5	
SW7509-7512		EVQ21405R	PUSH SWITCH	4	
SW7514		EVQ21405R	PUSH SWITCH	1	

○ MARK : THE MANUFACTURING PART NUMBER IS UPD75218CW-026; HOWEVER, TO ORDER THE PART, USE SERVICE ORDER PART NUMBER D75218CW-026.

(E19, E37, E38, E44)

Ref. No.		Part No.	Part Name & Description	Pcs/ Set	Remarks
			MISCELLANEOUS		
DP7501		VSZS0105	DISPLAY TUBE	1	
JK7151		VJHS0278	FRONT AV JACK	1	
E19		SPS-420-6	IR WIRELESS RECEIVING DETECTOR	1	
			UNIT		
E38		VGMS0498	DISPLAY TUBE HOLDER -L	1	
E37		VGMS0499	DISPLAY TUBE HOLDER -R	1	
E44		VJRS0091	CONNECTION PIECE 19P	2	
	■		**TIMER/OPERATION II C.B.A.**		
			(A,D,E,H,I)		
			SWITCHES		
SW7532		EVQQS205K		1	
	■		**OPERATION II C.B.A.**		
			(B,C,F,G)		
			SWITCHES		
SW7531		EVQQS205K		1	
	■		**CAPSTAN MOTOR DRIVE C.B.A.**		
			INTEGRATED CIRCUITS		
IC2501		AN3826NK	IC BIPOLAR LINEAR CAP. DRIVE	1	
IC2502		PUA3228	IC BIPOLAR LINEAR POWER	1	
			DRIVE		
			RESISTORS		
R2501		ERJ8GEYJ1R2V	MGF CHIP 1/8W 1. 2	1	
R2502		ERJ8GEYJ1R5V	MGF CHIP 1/8W 1. 5	1	
R2503		ERD21LLJ270	CHIP 1/8W 27	1	
R2504		ERD21LLJ330	CHIP 1/8W 33	1	
R2505		ERD21LLJ272	CHIP 1/8W 2. 7K	1	
			CAPACITORS		
C2501-2503		ECEA1CK100	ELECTROLYTIC 16V 10	3	
C2504		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0. 1	1	
C2505		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C2506		NCUV1E563KBN	C CHIP 25V 0. 056	1	
C2507, 2508		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0. 1	2	
C2509-2511		VCUS0BH103ZF	C CHIP +80%-20% 50V 0. 01	3	
C2512		NCUV1H152KBN	C CHIP 50V 0. 0015	1	
			PIN HEADERS		
P2501		VJSS0648	22P	1	
P2503		VJWS6HB095LE	FLAT CABLE 6P	1	
	■		**HEAD AMP ASS'Y**		
			(A,B,C,D,E)		
			DIODES		
D3501		WG713A		1	
			RESISTORS		
R3503		ERJ6GEYJ222V	MGF CHIP 1/10W 2. 2K	1	
R3504		ERJ6GEYJ152V	MGF CHIP 1/10W 1. 5K	1	
R3513		ERJ6GEYJ122V	MGF CHIP 1/10W 1. 2K	1	
R3514		ERJ6GEYJ332V	MGF CHIP 1/10W 3. 3K	1	
R3517		ERJ6GEYJ100V	MGF CHIP 1/10W 10	1	
R3518-3521		ERJ6GEYJ101V	MGF CHIP 1/10W 100	4	
R3522		ERJ6GEYJ222V	MGF CHIP 1/10W 2. 2K	1	
			CAPACITORS		
C3501		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0. 01	1	
C3502		ECEA0JK470	ELECTROLYTIC 6. 3V 47	1	
C3503		ECUZ1H472KBN	C CHIP 50V 0. 0047	1	
C3504		ECEA1HK010	ELECTROLYTIC 50V 1	1	

(E31, E32)

Ref. No.		Part No.	Part Name & Description	Pcs/ Set	Remarks
C3505, 3506		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	2	
C3508		ECUZ1C224ZFN	C CHIP +80%-20% 16V 0.22	1	
C3509		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C3510		ECEA1CK220	ELECTROLYTIC 16V 22	1	
C3511		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C3512		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C3513		ECUZ1H102KBN	C CHIP 50V 0.001	1	
C3514		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C3515		ECUZ1C474ZFN	C CHIP +80%-20% 16V 0.47	1	
C3516, 3517		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	2	
C3518, 3519		ECUZ1C474ZFN	C CHIP +80%-20% 16V 0.47	2	
C3520, 3521		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	2	
C3522		ECUZ1C474ZFN	C CHIP +80%-20% 16V 0.47	1	
C3523		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C3528		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
			COILS		
L3501		ELESN101KA	100	1	
L3502		ELESN390KA	39	1	
			PIN HEADERS		
P3501		VJSS0648	22P	1	
			MISCELLANEOUS		
E32		VSCS1757	SHIELD CASE -BODY	1	
E31		VSCS1758	SHIELD CASE -COVER	1	
	■		**Hi-Fi AUDIO/VIDEO HEAD AMP ASS'Y (F,G,H,I)**		
			INTEGRATED CIRCUITS		
IC2601		AN3813K	IC BIPOLAR LINEAR CYL. DRIVE	1	
IC4401		AN3317SB	IC BIPOLAR LINEAR Hi-Fi AUDIO HEAD AMP	1	
			DIODES		
D3501		WG713A		1	
			RESISTORS		
R2601-2603		ERD21LLJ471	CHIP 1/8W 470	3	
R2604		ERJ8GEYJ1R0Z	MGF CHIP 1/8W 1	1	
R2605		ERJ8GEYJ1R2Z	MGF CHIP 1/8W 1.2	1	
R2606		ERD21LLJ561	CHIP 1/8W 560	1	
R3503		ERJ6GEYJ222V	MGF CHIP 1/10W 2.2K	1	
R3504		ERJ6GEYJ152V	MGF CHIP 1/10W 1.5K	1	
R3513		ERJ6GEYJ122V	MGF CHIP 1/10W 1.2K	1	
R3514		ERJ6GEYJ332V	MGF CHIP 1/10W 3.3K	1	
R3517		ERJ6GEYJ100V	MGF CHIP 1/10W 10	1	
R3518-3521		ERJ6GEYJ101V	MGF CHIP 1/10W 100	4	
R3522		ERJ6GEYJ222V	MGF CHIP 1/10W 2.2K	1	
R4407		ERJ6GEYG183Z	MGF CHIP +-2% 1/10W 18K	1	
R4411		ERD21LLJ331	CHIP 1/8W 330	1	
R4412		ERD21LLJ562	CHIP 1/8W 5.6K	1	
R4413		ERD21LLJ223	CHIP 1/8W 22K	1	
R4414		ERD21LLJ122	CHIP 1/8W 1.2K	1	
R4415		ERD21LLJ391	CHIP 1/8W 390	1	
R4416		ERD21LLJ331	CHIP 1/8W 330	1	
R4417, 4418		ERD21LLJ100	CHIP 1/8W 10	2	
R4419		ERD21LLJ102	CHIP 1/8W 1K	1	
R4420		ERD21LLJ222	CHIP 1/8W 2.2K	1	
R4422		ERD21LLJ104	CHIP 1/8W 100K	1	
			CAPACITORS		
C2601-2603		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	3	
C2604-2607		ECUZ1E104KBN	C CHIP 25V 0.1	4	
C2608, 2609		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	2	
C2610		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C2611		ECUZ1E473KBN	C CHIP 25V 0.047	1	
C2612		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C3501		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C3502		ECEA0JK470	ELECTROLYTIC 6.3V 47	1	
C3503		ECUZ1H472KBN	C CHIP 50V 0.0047	1	

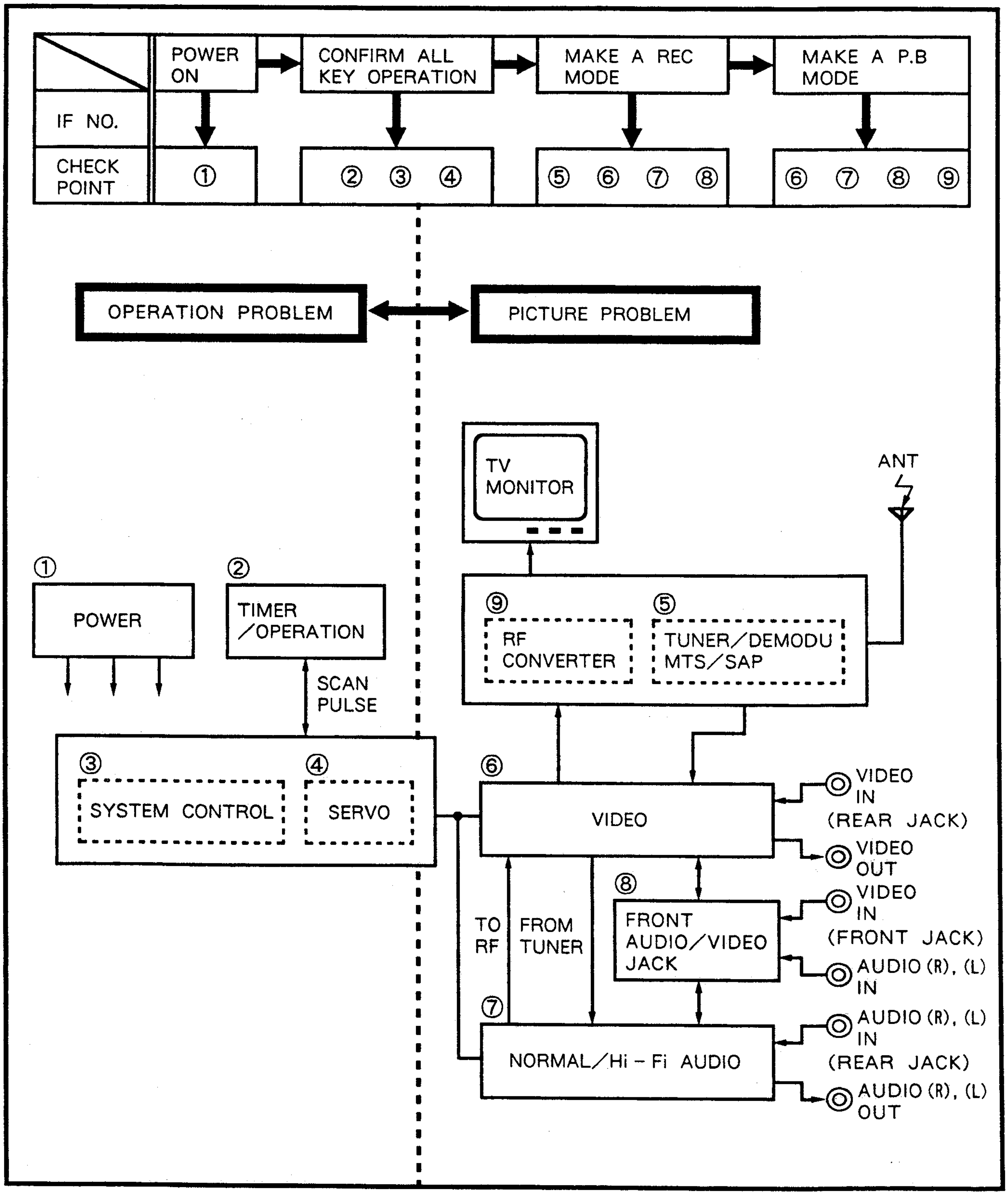
(E23, E24, E25, E27, E31, E32, E55)

Ref. No.		Part No.	Part Name & Description	Pcs/ Set	Remarks
C3504		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C3505, 3506		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	2	
C3508		ECUZ1C224ZFN	C CHIP +80%-20% 16V 0.22	1	
C3509		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C3510		ECEA1CK470	ELECTROLYTIC 16V 47	1	
C3511		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C3512		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C3513		ECUZ1H102KBN	C CHIP 50V 0.001	1	
C3514		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C3515		ECUZ1C224ZFN	C CHIP +80%-20% 16V 0.22	1	
C3516, 3517		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	2	
C3518, 3519		ECUZ1C224ZFN	C CHIP +80%-20% 16V 0.22	2	
C3520, 3521		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	2	
C3522		ECUZ1C224ZFN	C CHIP +80%-20% 16V 0.22	1	
C3523		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C3528		ECUZ1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C4403		ECUZ1H471KBN	C CHIP 50V 470P	1	
C4404		ECUZ1H151JCN	C CHIP +-5% 50V 150P	1	
C4405		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C4408		ECUZ1H103KBN	C CHIP 50V 0.01	1	
C4411, 4412		ECEA1HK010	ELECTROLYTIC 50V 1	2	
C4413, 4414		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	2	
C4415		ECEA1HK2R2	ELECTROLYTIC 50V 2.2	1	
C4416		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C4417		ECEA1HK010	ELECTROLYTIC 50V 1	1	
C4418		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	1	
C4419		ECEA0JKA101	ELECTROLYTIC 6.3V 100	1	
C4420-4422		ECUZ1H103ZFN	C CHIP +80%-20% 50V 0.01	3	
			COILS		
L3501		ELESN101KA	100	1	
L3502		ELESN390KA	39	1	
L4402		ELESN101KA	100	1	
			PIN HEADERS		
P3501		VJSS0647	24P	1	
			MISCELLANEOUS		
E32		VSCS1989	SHIELD CASE -BODY	1	
E31		VSCS1990	SHIELD CASE -COVER	1	
			ELECTRICAL PARTS LOCATED ON CHASSIS		
SW1551(E27)		VSSS0129	MODE SELECT SWITCH	1	
E23		VEPS0482A1	FE HEAD C.B.A. UNIT	1	
E24		VJBS00949	LOADING MOTOR P.C.B.	1	
E25		VJWS7AB107LL	FLAT CABLE 7P	1	
E55		VJWS2KN040AA (A, D, E, H, I)	FLAT CABLE 2P	1	
		VJWS2KN030AA (B, C, F, G)	FLAT CABLE 2P		
			"E"ITEM NUMBERS IN THE ELECTRICAL PARTS LIST		
E1		VEPS02197Y1	MAIN C.B.A.		
E1		VEPS02197Q1	MAIN C.B.A.		
E1		VEPS02197L1	MAIN C.B.A.		
E1		VEPS02200B1	MAIN C.B.A.		
E1		VEPS02198A1	MAIN C.B.A.		
E1		VEPS02198H1	MAIN C.B.A.		
E1		VEPS02198E1	MAIN C.B.A.		
E1		VEPS02201C1	MAIN C.B.A		
E2		VEPS04110A1	Hi-Fi AUDIO C.B.A.		
E3		VEPS01031B2	POWER SUFPLY ASS'Y		
E3		VEPS01031D2	POWER SUPPLY ASS'Y		
E5		VEPS07528A1	OPERATION I C.B.A.		
E5		VEPS07515A1	OPERATION I C.B.A.		
E5		VEPS07528C1	OPERATION I C.B.A.		
E5		VEPS07538A1	TIMRE/OPERATION I C.B.A.		
E5		VEPS07515B1	OPERATION I C.B.A.		
E5		VEPS07528B1	OPERATION I C.B.A.		
E5		VEPS07530B1	TIMER/OPERATION I C.B.A.		

Ref. No.		Part No.	Part Name & Description	Pcs/ Set	Remarks
E6		VEPS07535C1	TIMER/OPERATION II C.B.A.		
E6		VEPS07521A1	OPERATION II C.B.A.		
E7		VEPS0915A1	MTS/SAP C.B.A.		
E7		VEPS0914A1	MTS/SAP C.B.A.		
E9		VEPS02196A1	CAPSTAN MOTOR DRIVE C.B.A.		
E10		VEPS0554A1	HEAD AMP ASS'Y		
E10		VEPS0555A1	Hi-Fi AUDIO/VIDEO HEAD AMP		
			ASS'Y		
E11		VJHS0260	PIN JACK		
E11		VJHS0323	A/V JACK		
E12		VEQS0559	UHF/VHF TUNER/TV DEMODULATOR		
			UNIT		
E12		VEQS0553	UHF/VHF TUNER/TV DEMODULATOR		
			UNIT		
E13		VJAS0153	AC CORD		
E13		VJAS0154	AC CORD		
E14		VSCS1984	SHIELD CASE -TOP		
E15		VJSS0164	FUSE HOLDER		
E16		VSCS1982	SHIELD CASE -BODY		
E16		VSCS1982-1	SHIELD CASE -BODY		
E18		VMAS2067	SUPPORT ANGLE		
E19		SPS-420-6-N	IR WIRELESS RECEIVING DETECTOR		
			UNIT		
E19		SPS-420-6	IR WIRELESS RECEIVING DETECTOR		
			UNIT		
E20		2SC3870			
E20		2SC4130LF608			
E23		VEPS0482A1	FE HEAD C.B.A. UNIT		
E24		VJBS00949	LOADING MOTOR P.C.B.		
E25		VJWS7AB107LL	FLAT CABLE 7P		
E27		VSSS0129	MODE SELECT SWITCH		
E29		VEKS4588	PHOTO SENSOR UNIT		
E30		VEKS4589	SENSOR LED		
E31		VSCS1758	SHIELD CASE -COVER		
E31		VSCS1990	SHIELD CASE -COVER		
E32		VSCS1989	SHIELD CASE -BODY		
E32		VSCS1757	SHIELD CASE -BODY		
E33		VSCS1995	HEAT SINK PLATE		
E34		XNG3	M3 NUT		
E35		XYN3+F10S	SCREW WITH WASHER 3X10		
E37		VGMS0499	DISPLAY TUBE HOLDER -R		
E37		VGMS0497	DISPLAY TUBE HOLDER -R		
E38		VGMS0496	DISPLAY TUBE HOLDER -L		
E38		VGMS0498	DISPLAY TUBE HOLDER -L		
E44		VJRS0091	CONNECTION PIECE 19P		
E44		VJRS0092	CONNECTION PIECE 19P		
E44		VJRS0093	CONNECTION PIECE 19P		
E55		VJWS2KN040AA	FLAT CABLE 2P		
E55		VJWS2KN030AA	FLAT CABLE 2P		
E57		VXAS1689	SHIELD PLATE UNIT		

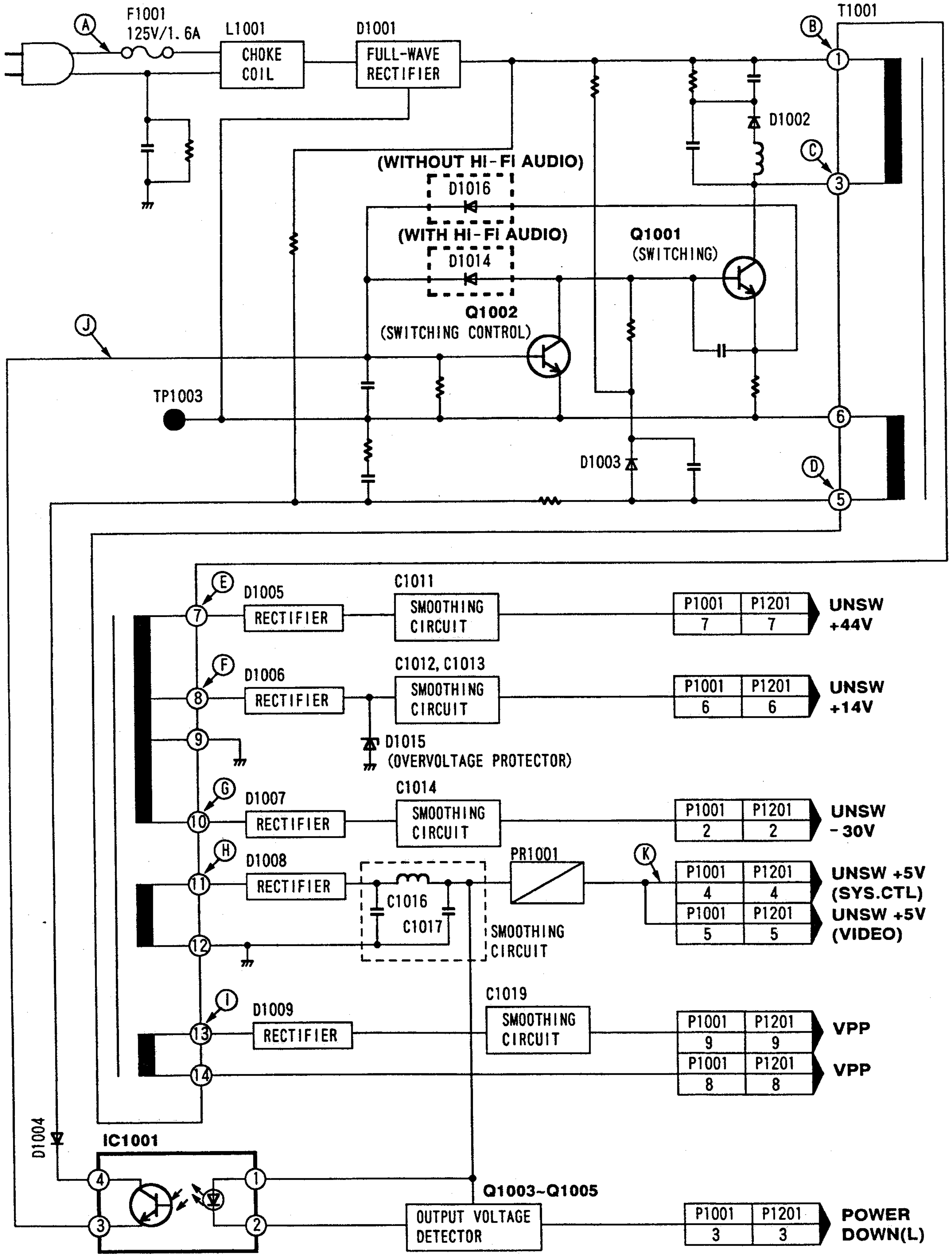
VII. BLOCK DIAGRAMS
OVERALL BLOCK DIAGRAM

※First determine whether the trouble is due to an Operation Problem or a Picture Problem. Use the following chart and then refer to the related sections on the following pages for troubleshooting.

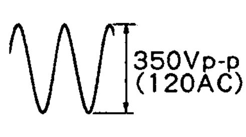
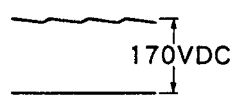
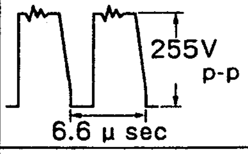
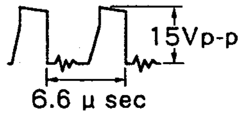
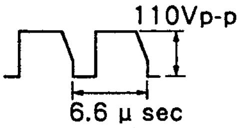
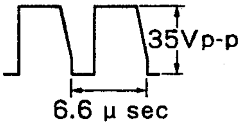
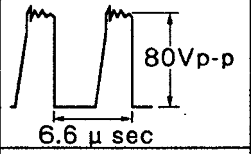
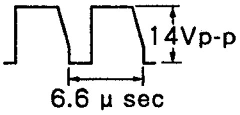
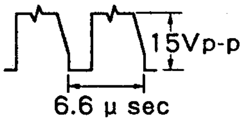
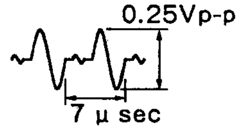


IF NO.
CHECK POINT
POWER ON
CONFIRM ALL KEY OPERATION
MAKE A REC MODE
MAKE A P.B MODE
①
② ③ ④
⑤ ⑥ ⑦ ⑧
⑥ ⑦ ⑧ ⑨
OPERATION PROBLEM
PICTURE PROBLEM
TV MONITOR
ANT
① POWER
② TIMER /OPERATION
SCAN PULSE
③ SYSTEM CONTROL
④ SERVO
⑨ RF CONVERTER
⑤ TUNER/DEMODU MTS/SAP
⑥ VIDEO
TO RF
FROM TUNER
⑧ FRONT AUDIO/VIDEO JACK
⑦ NORMAL/Hi-Fi AUDIO
VIDEO IN
(REAR JACK)
VIDEO OUT
VIDEO IN
(FRONT JACK)
AUDIO (R), (L) IN
AUDIO (R), (L) IN
(REAR JACK)
AUDIO (R), (L) OUT

POWER SUPPLY BLOCK DIAGRAM


Ⓐ
F1001
125V/1.6A
L1001
CHOKE COIL
D1001
FULL-WAVE RECTIFIER
Ⓑ
T1001
①
D1002
Ⓒ
③
(WITHOUT HI-FI AUDIO)
D1016
(WITH HI-FI AUDIO)
D1014
Q1001
(SWITCHING)
Q1002
(SWITCHING CONTROL)
Ⓙ
TP1003
⑥
D1003
Ⓓ
⑤
Ⓔ
D1005
RECTIFIER
C1011
SMOOTHING CIRCUIT
P1001 7
P1201 7
UNSW +44V
Ⓕ
D1006
RECTIFIER
C1012, C1013
SMOOTHING CIRCUIT
P1001 6
P1201 6
UNSW +14V
⑦
⑧
⑨
D1015
(OVERVOLTAGE PROTECTOR)
Ⓖ
D1007
RECTIFIER
C1014
SMOOTHING CIRCUIT
⑩
P1001 2
P1201 2
UNSW -30V
Ⓗ
D1008
RECTIFIER
⑪
⑫
C1016
C1017
SMOOTHING CIRCUIT
PR1001
Ⓚ
P1001 4
P1201 4
UNSW +5V (SYS.CTL)
P1001 5
P1201 5
UNSW +5V (VIDEO)
Ⓘ
D1009
RECTIFIER
⑬
⑭
C1019
SMOOTHING CIRCUIT
P1001 9
P1201 9
VPP
P1001 8
P1201 8
VPP
D1004
IC1001
④
③
①
②
Q1003~Q1005
OUTPUT VOLTAGE DETECTOR
P1001 3
P1201 3
POWER DOWN(L)

WAVEFORM OF POWER SUPPLY STAGE

NO	WAVEFORM	NOTE	NO	WAVEFORM	NOTE	NO	WAVEFORM	NOTE
Ⓐ	 350Vp-p (120AC)		Ⓑ		TP1003	Ⓒ	 255V p-p 6.6 μ sec	TP1003
Ⓓ	 15Vp-p 6.6 μ sec	TP1003	Ⓔ	 110Vp-p 6.6 μ sec	CHASSIS GND	Ⓕ	 35Vp-p 6.6 μ sec	CHASSIS GND
Ⓖ	 80Vp-p 6.6 μ sec	CHASSIS GND	Ⓗ	 14Vp-p 6.6 μ sec	CHASSIS GND	Ⓘ	 15Vp-p 6.6 μ sec	CHASSIS GND
Ⓙ	 0.25Vp-p 7 μ sec	TP1003						

NOTE : WAVEFORMS MEASURED IN STOP MODE.

POWER SUPPLY CHECKING PROCEDURE 1

SYMPTOM	FLOW OF TROUBLESHOOT ⟶								
No Power (Secondary circuit)	CHECK POINT	Ⓚ	Ⓔ	Ⓕ	Ⓖ	Ⓗ			
	IF NO.	⬇		⬇					
	CHANGE	PR1001		* NOTE1			* NOTE2		

* NOTE1 : If voltage is not correct, check primary circuit.
* NOTE2 : If all voltage is correct, check System Control circuit or Adjust Gear Phase.

SYMPTOM	FLOW OF TROUBLESHOOT ⟶								
No Power (Primary circuit)	CHECK POINT	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓙ			
	IF NO.	⬇		⬇					
	CHANGE	* NOTE1		F1001 Q1001 Q1002	* NOTE2				

* NOTE1 : Check AC Cord.
* NOTE2 : Change Q1001, Q1002 and F1001 at the same time.

SYMPTOM	FLOW OF TROUBLESHOOT ⟶								
	CHECK POINT								
	IF NO.								
	CHANGE								

NOTE : PLEASE USE BLANK BRACKETS TO NOTE ADDITIONAL INFORMATION.

POWER SUPPLY CHECKING PROCEDURE 2

(1). SHORT - CIRCUIT AND REPLACEMENT PARTS ON POWER LINE.

	CONDITION OF SHORT-CIRCUIT	DAMAGEABLE PARTS BY SHORT-CIRCUIT
(1)	5V➡GND	PR1001, D1008, Q1005
(2)	44V➡GND	D1005, R1010
(3)	14V➡GND 12V➡GND	D1006, D1015, Q1201, Q1202, R1209, D1201, D1202, D1203, D1204
(4)	-30V➡GND	R1011, D1007, R1205
(5)	44V➡14V	D1006, D1015, Q1201, Q1202, D1201, D1202, D1203, D1204
(6)	-30V➡5V	REPLACE THE ALL OF PARTS OF (1) AND (4)
(7)	14V➡12V	Q1201, Q1202, D1201, D1202, D1203, D1204
(8)	44V➡POWER DOWN(L)	Q1005

* NOTE1 : When parts are short circuited, supplying the Power for a long time may cause the fuse to blow.

* NOTE2 : In case of trouble on Power Pack only, no need to check 1200 series parts.

(2). IN CASE OF FUSE(F1001) BLOW.

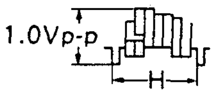
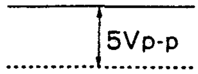
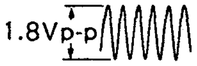
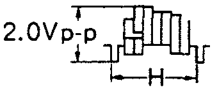
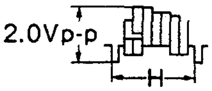
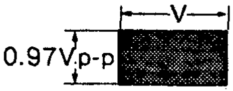
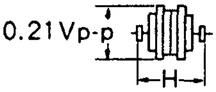
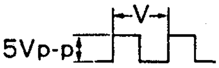
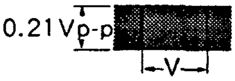
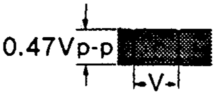
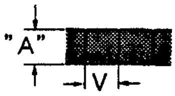
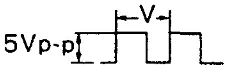
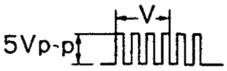
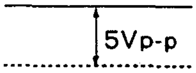
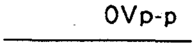
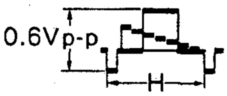
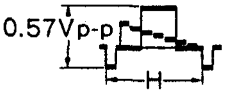
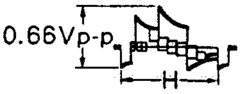
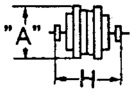
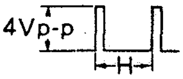
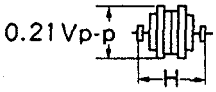
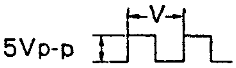
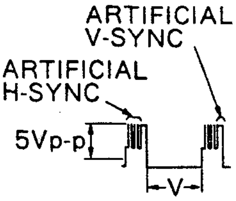
Replace Parts F1001, Q1001, Q1002, D1001 (Very rarely has problems), D1015.
Cause ➡ It may be caused by a short-circuit of 5V or 14V.

(3). JUST AFTER TURNING POWER ON, ABNORMAL NOISE CAN BE HEARD FROM POWER SUPPLY UNIT.

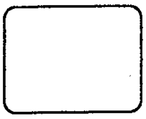
Replace Parts D1015, D1008, D1007, R1011.
Cause ➡ It may be caused by a short-circuit of 5V, -30V, 14V.
In such a condition, supplying the Power for a long time causes the fuse to blow.

WAVEFORM OF VIDEO STAGE

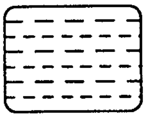
* NOTE : 1. The measurement mode of the waveforms in brackets on this chart is Record and Playback modes with NTSC color bar signal.
2. Please use blank brackets to note additional information.

NO	WAVEFORM	NOTE	NO	WAVEFORM	NOTE	NO	WAVEFORM	NOTE
Ⓐ		REC	Ⓑ		LINE (H) TUNER (L)	Ⓒ		
Ⓔ		REC／P.B	Ⓕ		REC／P.B	Ⓖ		REC
Ⓗ		REC	Ⓘ					
Ⓙ Ⓚ		REC (SP／LP ／SLP)	Ⓟ		P.B	Ⓠ		P.B SP"A" = 0.52Vp-p LP"A" = 0.35Vp-p SLP"A" = 0.3Vp-p
Ⓡ		STILL SP						
		CUE／REV						
		PB (SLP (H))						
		PB (SP (L))						
ⓐ		P.B	ⓑ		P.B			
ⓒ		REC	ⓓ		REC"A" = 0.2Vp-p P.B"A" = 0.14Vp-p	ⓔ		REC／P.B
		P.B						
ⓕ			ⓖ		CUE／REV ／SLOW ／STILL			

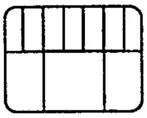
VIDEO CHECKING PROCEDURE

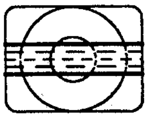
 NO PIX		FLOW OF TROUBLESHOOT →							
	CHECK POINT	Ⓐ	Ⓔ	Ⓕ	TV				
	IF NO.	↓	↓	↓	↓				
	CHANGE	* NOTE1	IC3001 * NOTE2	IC3301	* NOTE3				

* NOTE1 : Check Tuner/Demodu or Video In Terminal and signals (B).
* NOTE2 : Check signals EE (H) /VV (M) /Trick (L).
* NOTE3 : Check RF Converter or Video Out Terminal.

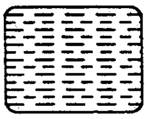
 NO REC		FLOW OF TROUBLESHOOT →							
	CHECK POINT	Ⓐ	Ⓖ	Ⓗ	Ⓘ	Ⓙ	Ⓚ	HEAD	
	IF NO.	↓	↓		↓	↓		↓	
	CHANGE	* NOTE1	IC3001 * NOTE2		IC6001 * NOTE3	HEAD AMP		UPPER CYLINDER * NOTE4	

* NOTE1 : Check Tuner/Demodu or Video In Terminal and signals (B).
* NOTE2 : Check signals (c), EE (H) /VV (M) /Trick (L).
* NOTE3 : Check Cylinder FG/PG signal at Pin 47 of IC6001.
* NOTE4 : Try head cleaning.

 NO COLOR		FLOW OF TROUBLESHOOT →							
	CHECK POINT	Ⓠ	ⓒ	ⓓ					
	IF NO.	↓	↓						
	CHANGE	HEAD AMP	DL3001						

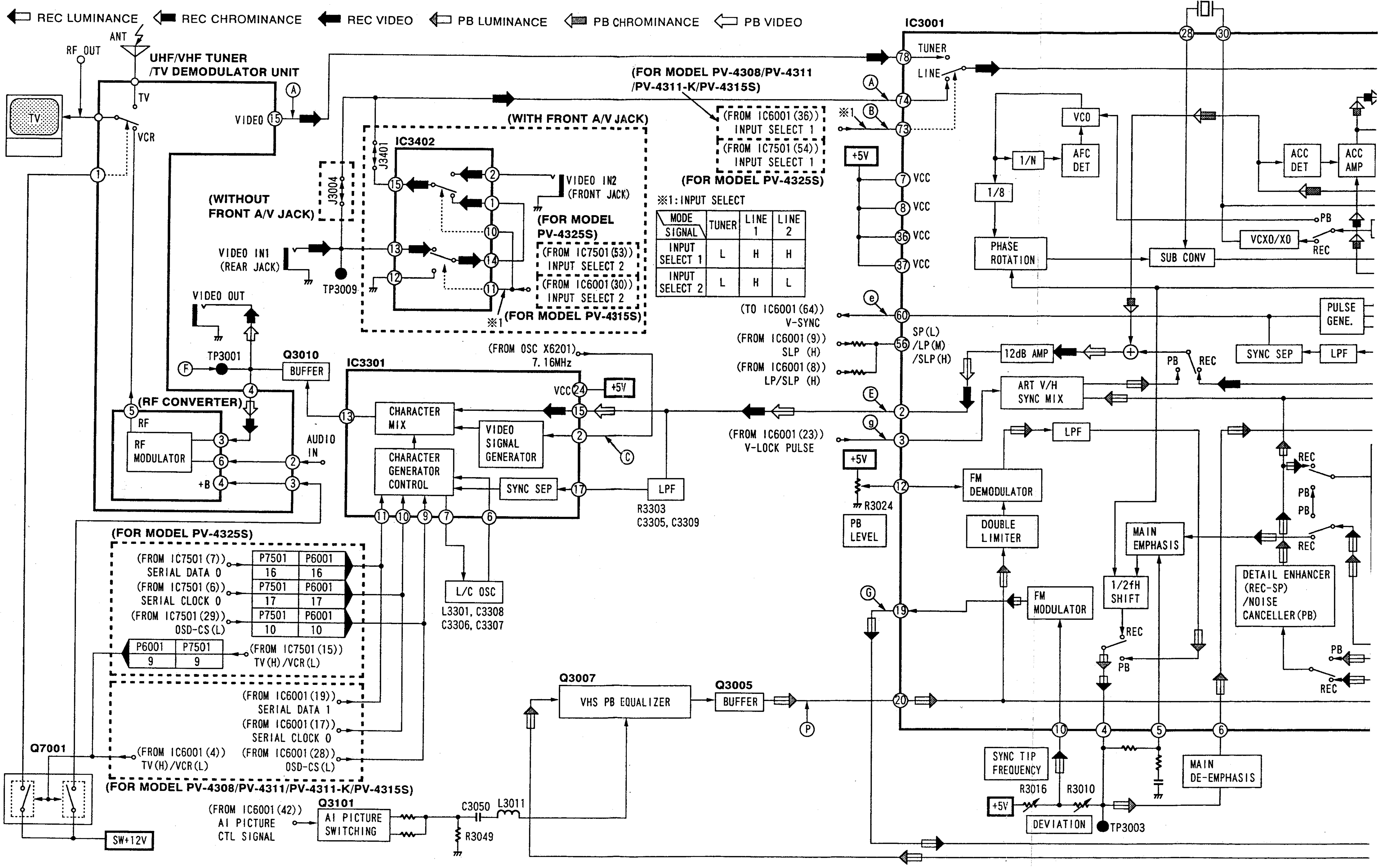
 WIDE NOISE BAND		FLOW OF TROUBLESHOOT →							
	CHECK POINT	Ⓛ	Ⓜ	Ⓝ	Ⓞ	Ⓘ	Ⓡ	—	
	IF NO.	↓				↓		↓	
	CHANGE	UPPER CYLINDER * NOTE1				* NOTE2		SEE SERVO SECTION	

* NOTE1 : Try head cleaning.
* NOTE2 : Check Cylinder FG/PG signal at Pin 47 of IC6001.

 P.B NOISE (SNOW)		FLOW OF TROUBLESHOOT →							
	CHECK POINT	Ⓟ	Ⓠ	Ⓔ	Ⓕ	TV			
	IF NO.	↓			↓	↓			
	CHANGE	IC3001 * NOTE1		* NOTE2	IC3301	* NOTE3			

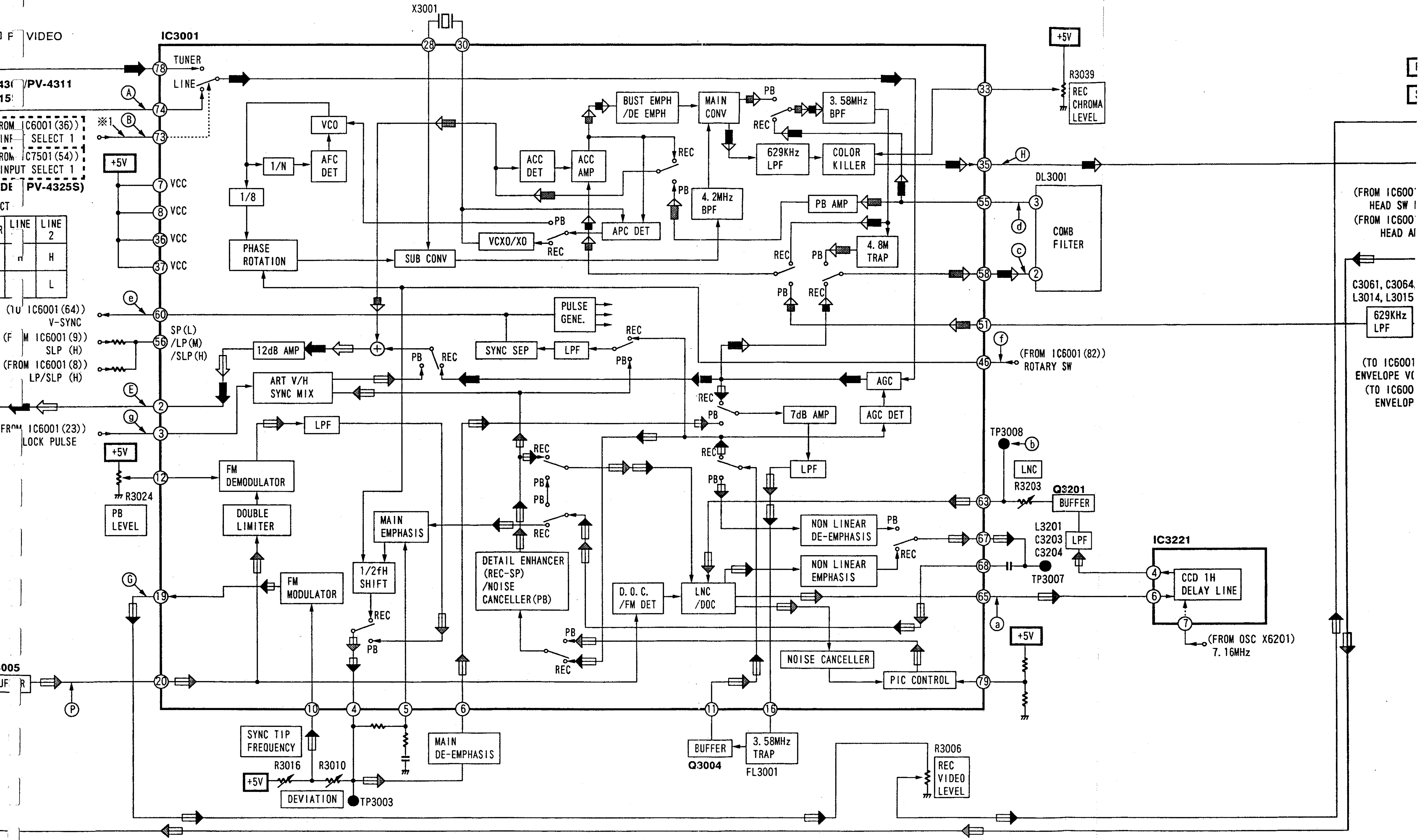
* NOTE1 : Try head cleaning and check Head Amp Shield Case or signals from (L) to (O),(I) and (R).
* NOTE2 : Check signals from (c).
* NOTE3 : Check RF Converter or Video Out Terminal.

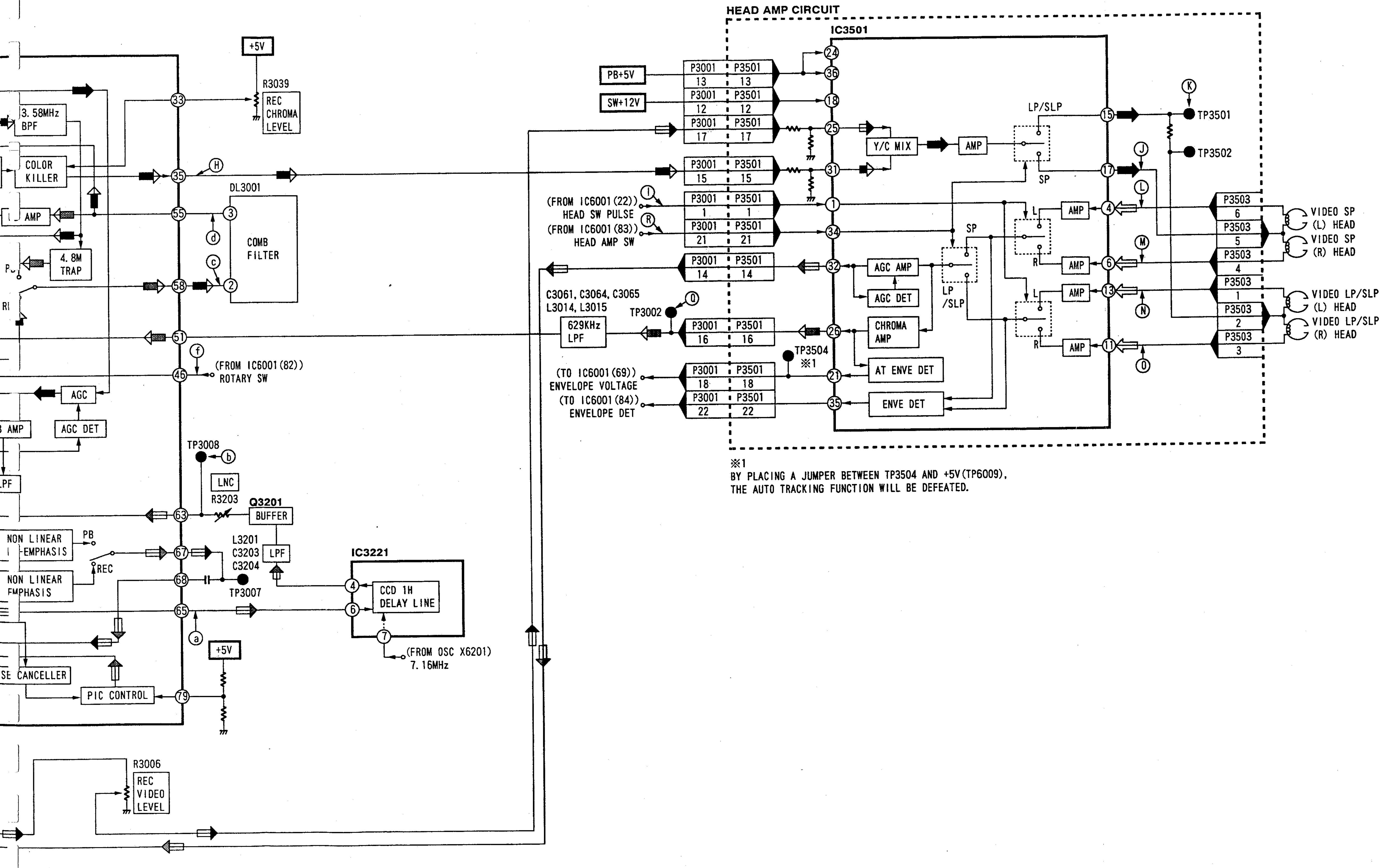
VIDEO BLOCK DIAGRAM (WITHOUT Hi-Fi AUDIO)


REC LUMINANCE
REC CHROMINANCE
REC VIDEO
PB LUMINANCE
PB CHROMINANCE
PB VIDEO
ANT
RF OUT
UHF/VHF TUNER
/TV DEMODULATOR UNIT
TV
VCR
VIDEO 15
A
(WITH FRONT A/V JACK)
J3401
IC3402
J3004
(WITHOUT FRONT A/V JACK)
VIDEO IN2 (FRONT JACK)
(FOR MODEL PV-4325S)
(FROM IC7501(53)) INPUT SELECT 2
(FROM IC6001(30)) INPUT SELECT 2
※1 (FOR MODEL PV-4315S)
VIDEO IN1 (REAR JACK)
TP3009
VIDEO OUT
TP3001
F
Q3010
BUFFER
IC3301
(RF CONVERTER)
RF
RF MODULATOR
AUDIO IN
+B
(FROM OSC X6201) 7.16MHz
VCC 24
+5V
CHARACTER MIX
VIDEO SIGNAL GENERATOR
CHARACTER GENERATOR CONTROL
SYNC SEP
C
LPF
R3303
C3305, C3309
L/C OSC
L3301, C3308
C3306, C3307
(FOR MODEL PV-4325S)
(FROM IC7501(7)) SERIAL DATA 0
(FROM IC7501(6)) SERIAL CLOCK 0
(FROM IC7501(29)) OSD-CS(L)
P7501 16 P6001 16
P7501 17 P6001 17
P7501 10 P6001 10
P6001 9 P7501 9
(FROM IC7501(15)) TV(H)/VCR(L)
(FROM IC6001(19)) SERIAL DATA 1
(FROM IC6001(17)) SERIAL CLOCK 0
(FROM IC6001(4)) TV(H)/VCR(L)
(FROM IC6001(28)) OSD-CS(L)
(FOR MODEL PV-4308/PV-4311/PV-4311-K/PV-4315S)
Q7001
SW+12V
(FROM IC6001(42)) AI PICTURE CTL SIGNAL
Q3101
AI PICTURE SWITCHING
C3050
L3011
R3049
Q3007
VHS PB EQUALIZER
Q3005
BUFFER
P
(FOR MODEL PV-4308/PV-4311 /PV-4311-K/PV-4315S)
(FROM IC6001(36)) INPUT SELECT 1
(FROM IC7501(54)) INPUT SELECT 1
(FOR MODEL PV-4325S)
※1 B
IC3001
TUNER
LINE
+5V
VCC
(TO IC6001(64)) V-SYNC
(FROM IC6001(9)) SLP (H)
(FROM IC6001(8)) LP/SLP (H)
SP(L) /LP(M) /SLP(H)
e
E
g
(FROM IC6001(23)) V-LOCK PULSE
+5V
R3024
PB LEVEL
G
X3001
VCO
AFC DET
1/N
1/8
PHASE ROTATION
SUB CONV
ACC DET
ACC AMP
VCXO/XO
PB
REC
PULSE GENE.
SYNC SEP
LPF
12dB AMP
ART V/H SYNC MIX
LPF
FM DEMODULATOR
DOUBLE LIMITER
FM MODULATOR
MAIN EMPHASIS
1/2fH SHIFT
DETAIL ENHANCER (REC-SP) /NOISE CANCELLER(PB)
SYNC TIP FREQUENCY
R3016
R3010
DEVIATION
TP3003
MAIN DE-EMPHASIS

※1: INPUT SELECT

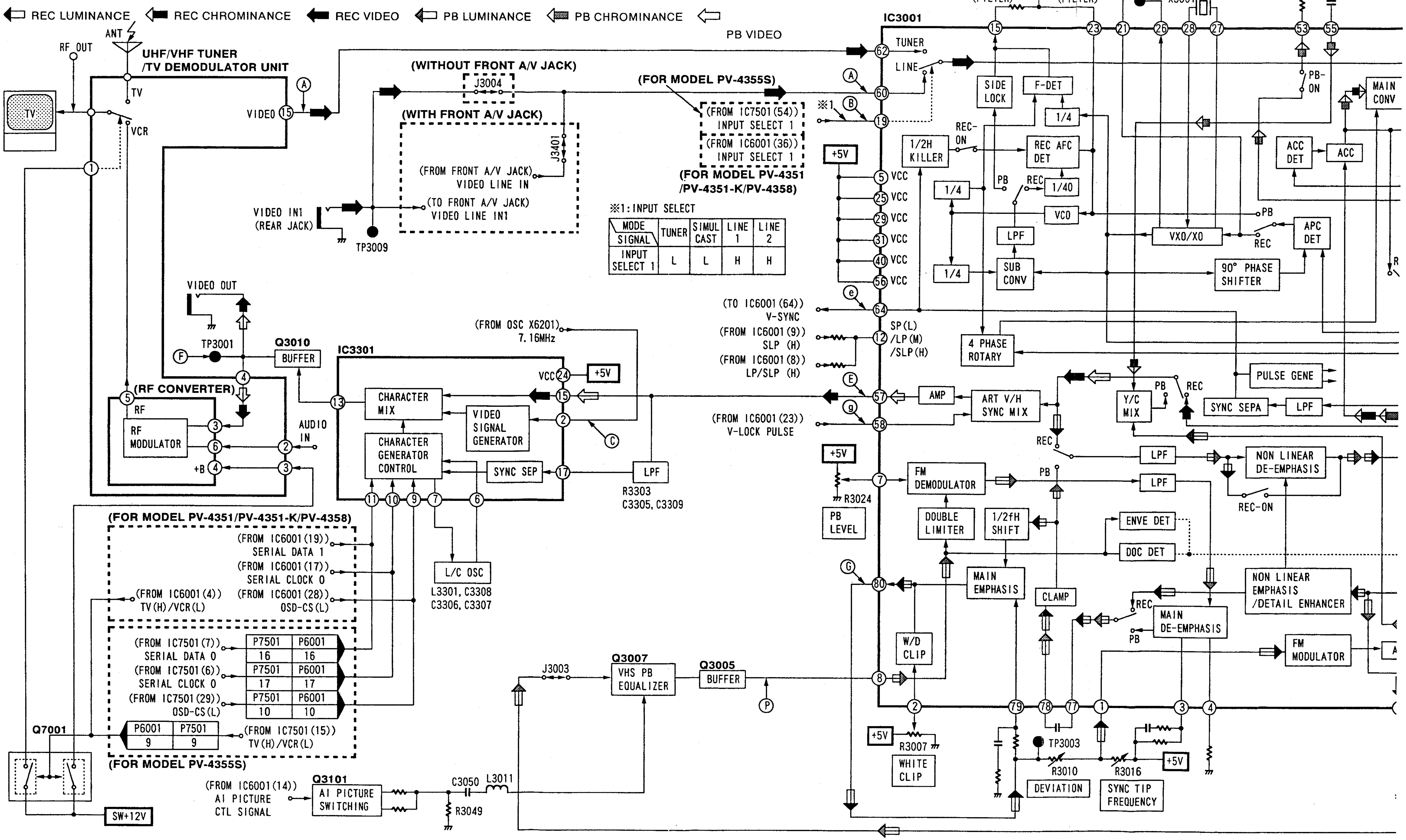
MODE \ SIGNAL	TUNER	LINE 1	LINE 2
INPUT SELECT 1	L	H	H
INPUT SELECT 2	L	H	L


VIDEO
IC3001
X3001
TUNER
LINE
/PV-4311
ROM IC6001(36))
INPUT SELECT 1
ROM IC7501(54))
INPUT SELECT 1
PV-4325S)
※1
+5V
VCC
VCC
VCC
VCC
LINE
LINE 2
H
L
IC6001(64))
V-SYNC
M IC6001(9))
SLP (H)
(FROM IC6001(8))
LP/SLP (H)
SP(L)
/LP(M)
/SLP(H)
IC6001(23))
LOCK PULSE
R3024
PB LEVEL
VCO
AFC DET
1/N
1/8
PHASE ROTATION
SUB CONV
VCXO/XO
ACC DET
ACC AMP
APC DET
BUST EMPH /DE EMPH
MAIN CONV
4.2MHz BPF
3.58MHz BPF
629KHz LPF
COLOR KILLER
PB AMP
4.8M TRAP
PULSE GENE.
SYNC SEP
LPF
12dB AMP
ART V/H SYNC MIX
AGC
AGC DET
7dB AMP
LPF
FM DEMODULATOR
DOUBLE LIMITER
FM MODULATOR
MAIN EMPHASIS
1/2fH SHIFT
DETAIL ENHANCER (REC-SP) /NOISE CANCELLER(PB)
D.O.C. /FM DET
LNC /DOC
NON LINEAR DE-EMPHASIS
NON LINEAR EMPHASIS
NOISE CANCELLER
PIC CONTROL
SYNC TIP FREQUENCY
R3016
R3010
DEVIATION
TP3003
MAIN DE-EMPHASIS
BUFFER
Q3004
3.58MHz TRAP
FL3001
R3006
REC VIDEO LEVEL
REC
PB
R3039
REC CHROMA LEVEL
DL3001
COMB FILTER
(FROM IC6001(82))
ROTARY SW
TP3008
LNC
R3203
Q3201
BUFFER
L3201
C3203
C3204
LPF
TP3007
IC3221
CCD 1H DELAY LINE
(FROM OSC X6201)
7.16MHz
(FROM IC600
HEAD SW
(FROM IC600
HEAD A
C3061, C3064
L3014, L3015
629KHz LPF
(TO IC6001
ENVELOPE V
(TO IC600
ENVELOP
005
A
B
E
G
H
P
a
b
c
d
e
f
g
78
74
73
7
8
36
37
60
56
2
3
12
19
20
28
30
10
4
5
6
11
16
33
35
55
58
51
46
63
67
68
65
79


HEAD AMP CIRCUIT
IC3501
+5V
R3039
REC CHROMA LEVEL
3.58MHz BPF
COLOR KILLER
AMP
4.8M TRAP
AGC
AGC DET
AMP
LPF
DL3001
COMB FILTER
(FROM IC6001(82)) ROTARY SW
TP3008
LNC
R3203
Q3201
BUFFER
L3201 C3203 C3204
LPF
TP3007
NON LINEAR EMPHASIS
NON LINEAR EMPHASIS
PB
REC
IC3221
CCD 1H DELAY LINE
(FROM OSC X6201) 7.16MHz
+5V
CANCELLER
PIC CONTROL
R3006
REC VIDEO LEVEL
33
35
55
58
51
46
63
67
68
65
79
3
2
4
6
7
PB+5V
SW+12V
P3001 13
P3501 13
P3001 12
P3501 12
P3001 17
P3501 17
P3001 15
P3501 15
P3001 1
P3501 1
P3001 21
P3501 21
P3001 14
P3501 14
P3001 16
P3501 16
P3001 18
P3501 18
P3001 22
P3501 22
(FROM IC6001(22)) HEAD SW PULSE
(FROM IC6001(83)) HEAD AMP SW
C3061, C3064, C3065 L3014, L3015
TP3002
629KHz LPF
TP3504 ※1
(TO IC6001(69)) ENVELOPE VOLTAGE
(TO IC6001(84)) ENVELOPE DET
24
36
18
25
31
1
34
32
26
21
35
Y/C MIX
AMP
LP/SLP
SP
AGC AMP
AGC DET
LP /SLP
CHROMA AMP
AT ENVE DET
ENVE DET
AMP
AMP
AMP
AMP
L
R
L
R
15
17
4
6
13
11
TP3501
TP3502
P3503 6
P3503 5
P3503 4
P3503 1
P3503 2
P3503 3
VIDEO SP (L) HEAD
VIDEO SP (R) HEAD
VIDEO LP/SLP (L) HEAD
VIDEO LP/SLP (R) HEAD
H
d
c
f
b
a
I
R
0
K
J
L
M
N
0

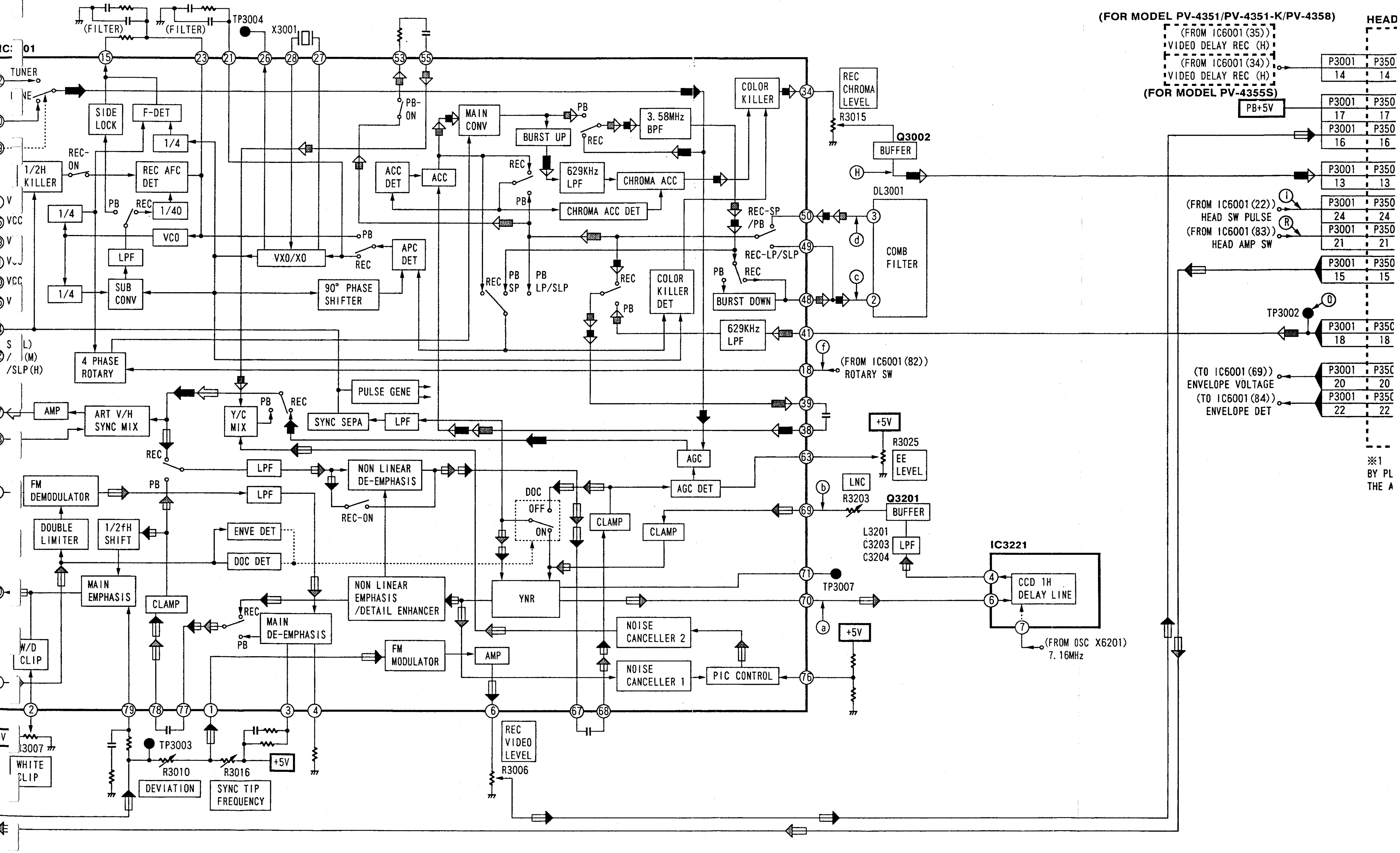
※1
BY PLACING A JUMPER BETWEEN TP3504 AND +5V(TP6009),
THE AUTO TRACKING FUNCTION WILL BE DEFEATED.

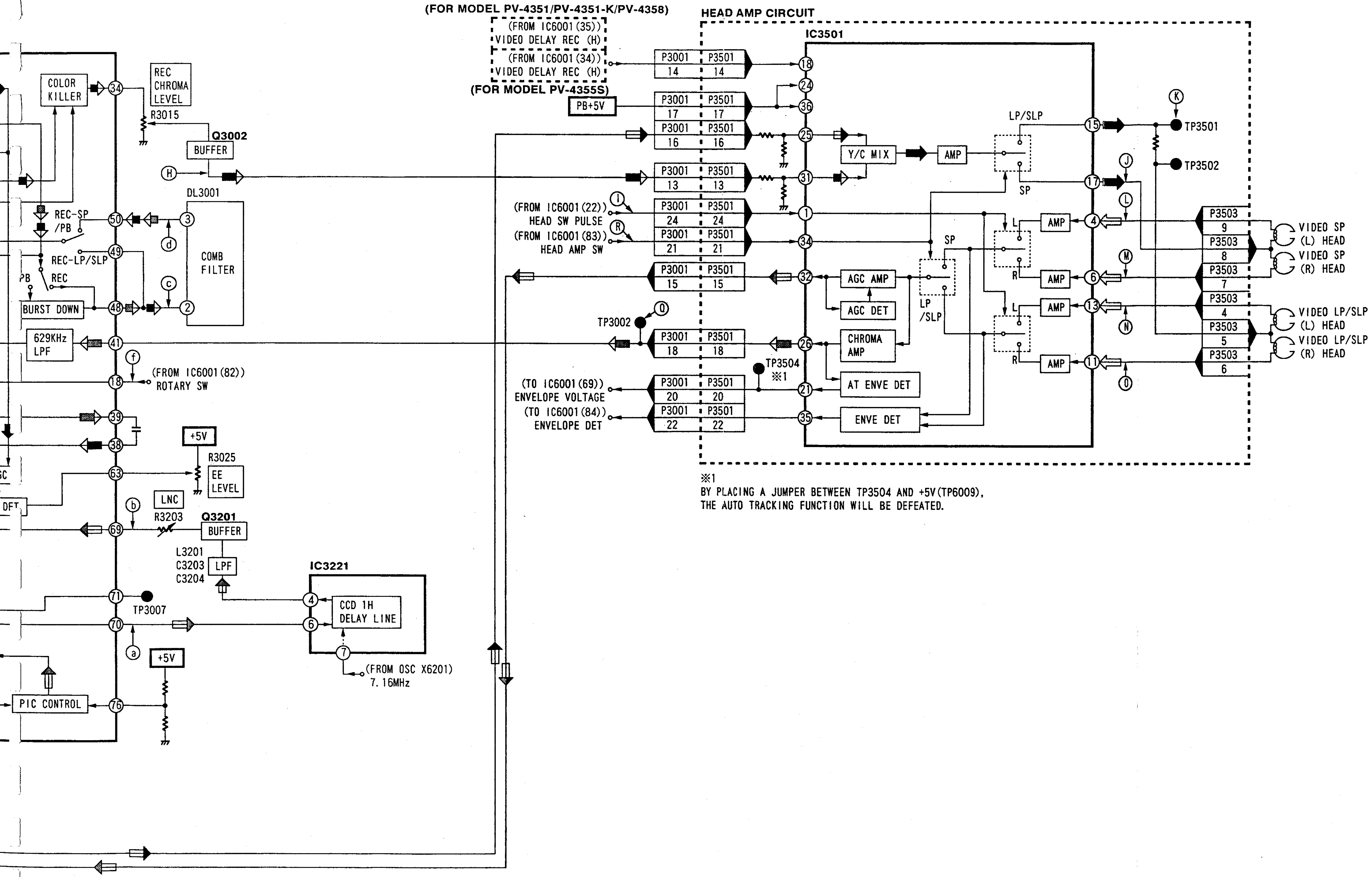
VIDEO BLOCK DIAGRAM (WITH Hi-Fi AUDIO)


REC LUMINANCE
REC CHROMINANCE
REC VIDEO
PB LUMINANCE
PB CHROMINANCE
PB VIDEO
ANT
RF OUT
UHF/VHF TUNER
/TV DEMODULATOR UNIT
TV
VCR
VIDEO 15
A
(WITHOUT FRONT A/V JACK)
J3004
(WITH FRONT A/V JACK)
J3401
(FROM FRONT A/V JACK) VIDEO LINE IN
(TO FRONT A/V JACK) VIDEO LINE IN1
VIDEO IN1 (REAR JACK)
TP3009
(FOR MODEL PV-4355S)
(FROM IC7501(54)) INPUT SELECT 1
(FROM IC6001(36)) INPUT SELECT 1
(FOR MODEL PV-4351 /PV-4351-K/PV-4358)
※1
B
※1: INPUT SELECT
+5V
VCC
e
(TO IC6001(64)) V-SYNC
(FROM IC6001(9)) SLP (H)
(FROM IC6001(8)) LP/SLP (H)
SP(L) /LP(M) /SLP(H)
E
g
(FROM IC6001(23)) V-LOCK PULSE
VIDEO OUT
TP3001
F
Q3010
BUFFER
IC3301
(RF CONVERTER)
RF
RF MODULATOR
+B
AUDIO IN
CHARACTER MIX
VIDEO SIGNAL GENERATOR
CHARACTER GENERATOR CONTROL
SYNC SEP
(FROM OSC X6201) 7.16MHz
C
LPF
R3303 C3305, C3309
L/C OSC
L3301, C3308 C3306, C3307
(FOR MODEL PV-4351/PV-4351-K/PV-4358)
(FROM IC6001(19)) SERIAL DATA 1
(FROM IC6001(17)) SERIAL CLOCK 0
(FROM IC6001(4)) TV(H)/VCR(L)
(FROM IC6001(28)) OSD-CS(L)
(FROM IC7501(7)) SERIAL DATA 0
(FROM IC7501(6)) SERIAL CLOCK 0
(FROM IC7501(29)) OSD-CS(L)
(FROM IC7501(15)) TV(H)/VCR(L)
P7501 P6001 16 16
P7501 P6001 17 17
P7501 P6001 10 10
P6001 P7501 9 9
(FOR MODEL PV-4355S)
Q7001
SW+12V
(FROM IC6001(14)) AI PICTURE CTL SIGNAL
Q3101
AI PICTURE SWITCHING
C3050 L3011
R3049
J3003
Q3007
VHS PB EQUALIZER
Q3005
BUFFER
P
IC3001
(FILTER)
(FILTER)
TP3004
X3001
TUNER
LINE
SIDE LOCK
F-DET
1/4
REC-ON
1/2H KILLER
REC AFC DET
PB
REC
1/40
1/4
VCO
LPF
VXO/XO
APC DET
SUB CONV
90° PHASE SHIFTER
4 PHASE ROTARY
PULSE GENE
PB-ON
MAIN CONV
ACC DET
ACC
AMP
ART V/H SYNC MIX
Y/C MIX
SYNC SEPA
LPF
LPF
NON LINEAR DE-EMPHASIS
REC-ON
+5V
R3024
PB LEVEL
FM DEMODULATOR
DOUBLE LIMITER
1/2fH SHIFT
ENVE DET
DOC DET
G
MAIN EMPHASIS
CLAMP
NON LINEAR EMPHASIS /DETAIL ENHANCER
MAIN DE-EMPHASIS
W/D CLIP
FM MODULATOR
R3007
WHITE CLIP
TP3003
R3010
DEVIATION
R3016
SYNC TIP FREQUENCY
R

※1: INPUT SELECT

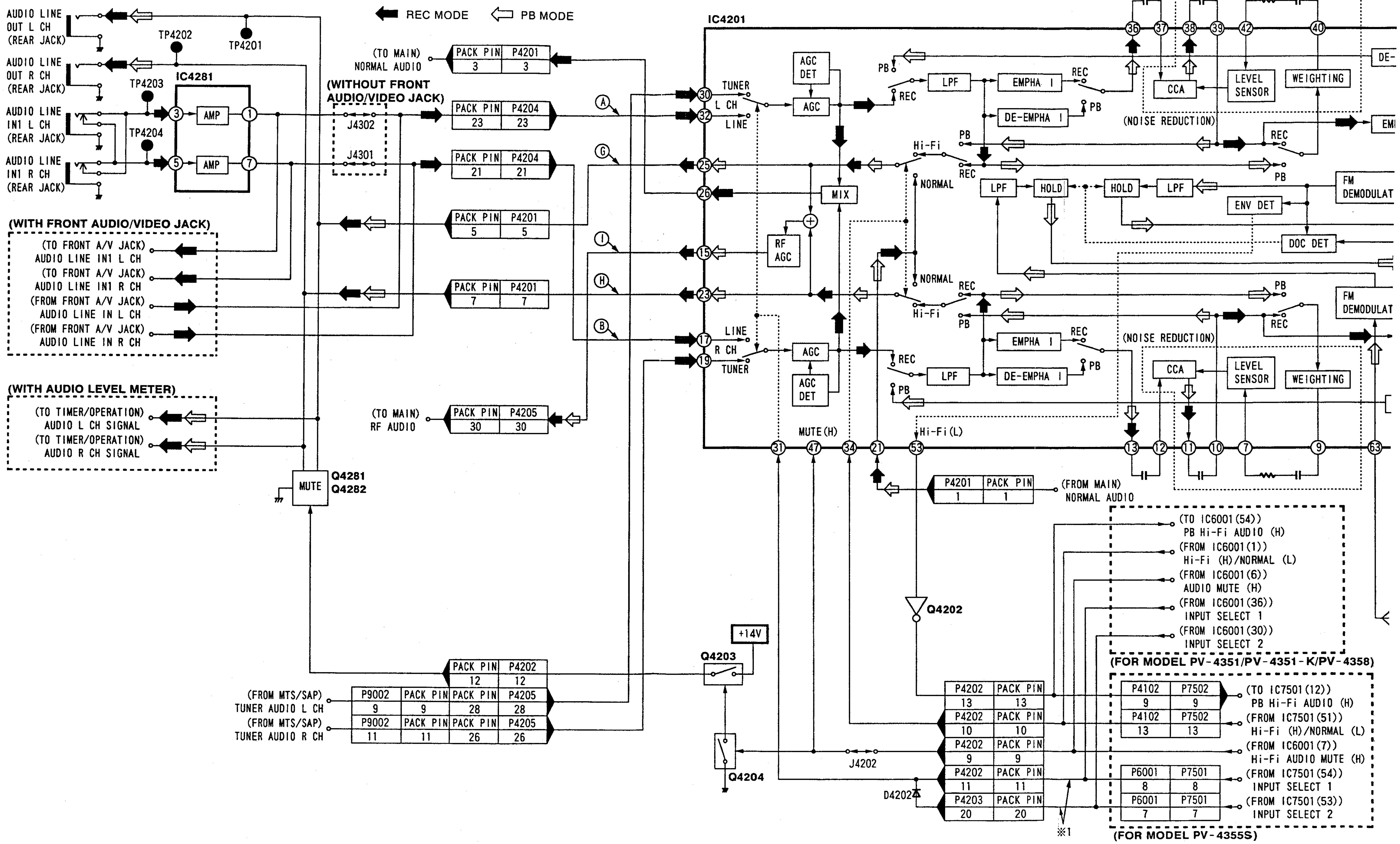
MODE \ SIGNAL	TUNER	SIMUL CAST	LINE 1	LINE 2
INPUT SELECT 1	L	L	H	H

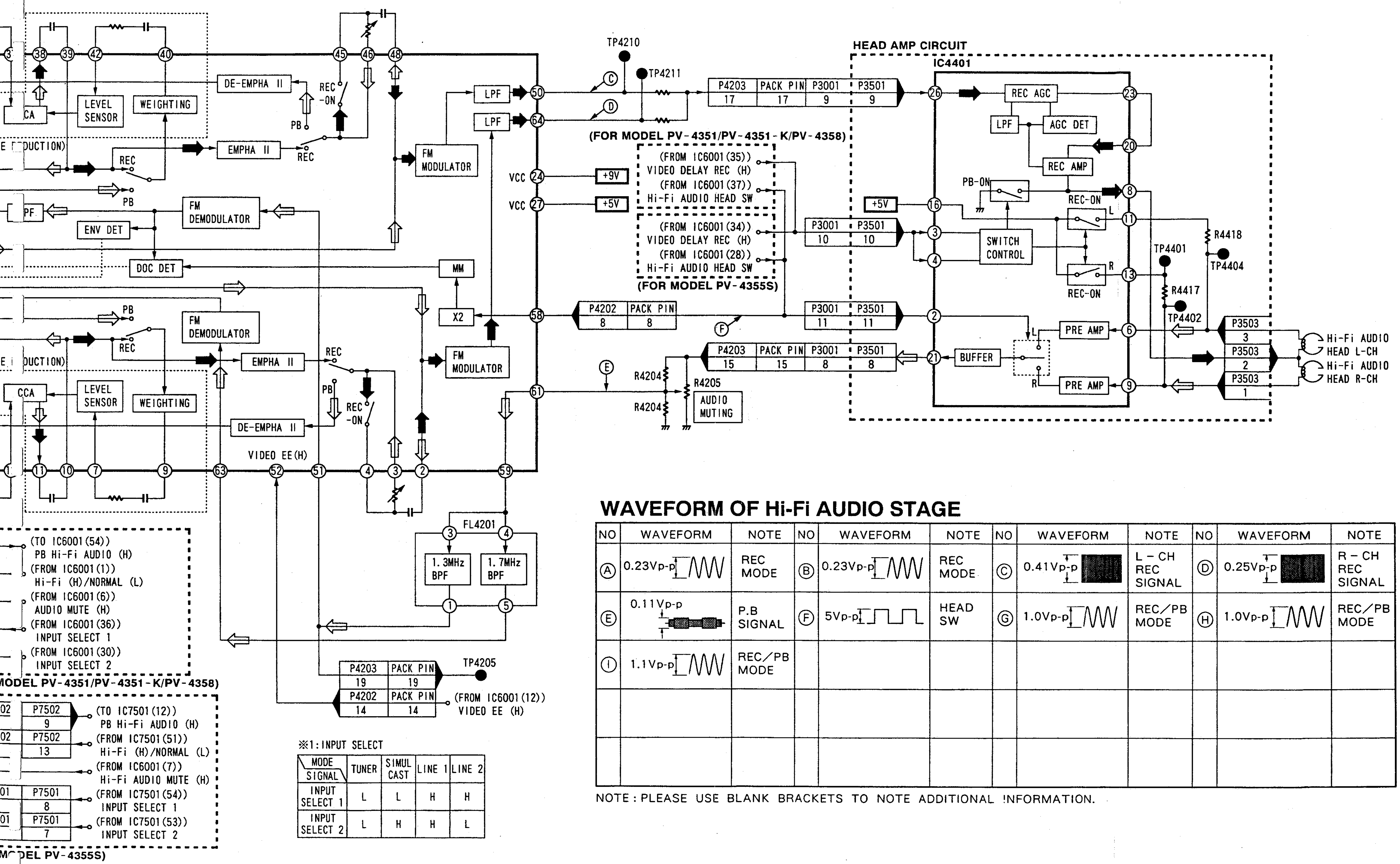

(FOR MODEL PV-4351/PV-4351-K/PV-4358)
(FROM IC6001(35))
VIDEO DELAY REC (H)
(FROM IC6001(34))
VIDEO DELAY REC (H)
(FOR MODEL PV-4355S)
PB+5V
HEAD
P3001 14 P350 14
P3001 17 P350 17
P3001 16 P350 16
P3001 13 P350 13
P3001 24 P350 24
P3001 21 P350 21
P3001 15 P350 15
P3001 18 P350 18
P3001 20 P350 20
P3001 22 P350 22
(FROM IC6001(22))
HEAD SW PULSE
(FROM IC6001(83))
HEAD AMP SW
TP3002
(TO IC6001(69))
ENVELOPE VOLTAGE
(TO IC6001(84))
ENVELOPE DET
※1
BY PL
THE A
IC 01
TUNER
LINE
(FILTER)
(FILTER)
TP3004
X3001
SIDE LOCK
F-DET
1/4
REC-ON
1/2H KILLER
REC AFC DET
1/4
PB
REC
1/40
VCO
LPF
1/4
SUB CONV
VXO/XO
90° PHASE SHIFTER
APC DET
PB
REC
PB-ON
MAIN CONV
PB
BURST UP
3.58MHz BPF
REC
ACC DET
ACC
REC
629KHz LPF
CHROMA ACC
PB
CHROMA ACC DET
REC
PB SP
PB LP/SLP
REC
COLOR KILLER DET
PB
COLOR KILLER
REC CHROMA LEVEL
R3015
Q3002
BUFFER
H
DL3001
COMB FILTER
REC-SP /PB
REC-LP/SLP
PB
REC
BURST DOWN
629KHz LPF
d
c
4 PHASE ROTARY
f
(FROM IC6001(82))
ROTARY SW
PULSE GENE
AMP
ART V/H SYNC MIX
Y/C MIX
PB
REC
SYNC SEPA
LPF
REC
LPF
NON LINEAR DE-EMPHASIS
REC-ON
+5V
R3025
EE LEVEL
AGC
AGC DET
FM DEMODULATOR
PB
LPF
DOC
OFF
ON
CLAMP
CLAMP
DOUBLE LIMITER
1/2fH SHIFT
ENVE DET
DOC DET
b
LNC
R3203
Q3201
BUFFER
L3201
C3203
C3204
LPF
IC3221
MAIN EMPHASIS
CLAMP
REC
PB
MAIN DE-EMPHASIS
NON LINEAR EMPHASIS /DETAIL ENHANCER
YNR
TP3007
CCD 1H DELAY LINE
(FROM OSC X6201)
7.16MHz
W/D CLIP
FM MODULATOR
AMP
NOISE CANCELLER 2
NOISE CANCELLER 1
PIC CONTROL
a
+5V
R3007
WHITE CLIP
TP3003
R3010
DEVIATION
R3016
SYNC TIP FREQUENCY
+5V
REC VIDEO LEVEL
R3006
S L)
(M)
/SLP(H)
V
VCC
15
23
21
26
28
27
53
55
34
50
49
48
41
18
39
38
63
69
71
70
76
2
79
78
77
1
3
4
6
67
68
3
2
4
6
7


(FOR MODEL PV-4351/PV-4351-K/PV-4358)
(FROM IC6001(35)) VIDEO DELAY REC (H)
(FROM IC6001(34)) VIDEO DELAY REC (H)
(FOR MODEL PV-4355S)
PB+5V
HEAD AMP CIRCUIT
IC3501
COLOR KILLER
REC CHROMA LEVEL
R3015
Q3002
BUFFER
DL3001
COMB FILTER
REC-SP /PB
REC-LP/SLP
PB
REC
BURST DOWN
629KHz LPF
(FROM IC6001(82)) ROTARY SW
+5V
R3025
EE LEVEL
LNC
R3203
Q3201
BUFFER
L3201 C3203 C3204
LPF
IC3221
CCD 1H DELAY LINE
(FROM OSC X6201) 7.16MHz
TP3007
PIC CONTROL
(FROM IC6001(22)) HEAD SW PULSE
(FROM IC6001(83)) HEAD AMP SW
TP3002
(TO IC6001(69)) ENVELOPE VOLTAGE
(TO IC6001(84)) ENVELOPE DET
TP3504 ※1
P3001 P3501
Y/C MIX
AMP
LP/SLP
SP
AGC AMP
AGC DET
CHROMA AMP
AT ENVE DET
ENVE DET
LP /SLP
TP3501
TP3502
P3503
VIDEO SP (L) HEAD
VIDEO SP (R) HEAD
VIDEO LP/SLP (L) HEAD
VIDEO LP/SLP (R) HEAD

※1
BY PLACING A JUMPER BETWEEN TP3504 AND +5V(TP6009), THE AUTO TRACKING FUNCTION WILL BE DEFEATED.

Hi-Fi AUDIO BLOCK DIAGRAM


REC MODE
PB MODE
AUDIO LINE OUT L CH (REAR JACK)
AUDIO LINE OUT R CH (REAR JACK)
AUDIO LINE IN1 L CH (REAR JACK)
AUDIO LINE IN1 R CH (REAR JACK)
TP4202
TP4201
TP4203
TP4204
IC4281
AMP
AMP
3
1
5
7
(TO MAIN) NORMAL AUDIO
PACK PIN P4201 3 3
(WITHOUT FRONT AUDIO/VIDEO JACK)
J4302
J4301
PACK PIN P4204 23 23
PACK PIN P4204 21 21
PACK PIN P4201 5 5
PACK PIN P4201 7 7
(WITH FRONT AUDIO/VIDEO JACK)
(TO FRONT A/V JACK) AUDIO LINE IN1 L CH
(TO FRONT A/V JACK) AUDIO LINE IN1 R CH
(FROM FRONT A/V JACK) AUDIO LINE IN L CH
(FROM FRONT A/V JACK) AUDIO LINE IN R CH
(WITH AUDIO LEVEL METER)
(TO TIMER/OPERATION) AUDIO L CH SIGNAL
(TO TIMER/OPERATION) AUDIO R CH SIGNAL
(TO MAIN) RF AUDIO
PACK PIN P4205 30 30
MUTE
Q4281
Q4282
PACK PIN P4202 12 12
(FROM MTS/SAP) TUNER AUDIO L CH
(FROM MTS/SAP) TUNER AUDIO R CH
P9002 PACK PIN PACK PIN P4205 9 9 28 28
P9002 PACK PIN PACK PIN P4205 11 11 26 26
Ⓐ
Ⓖ
Ⓘ
Ⓗ
Ⓑ
IC4201
30 TUNER L CH
32 LINE
25
26
15
23
17 LINE R CH
19 TUNER
AGC DET
AGC
AGC
AGC DET
MIX
RF AGC
PB
REC
LPF
EMPHA I
DE-EMPHA I
REC
PB
CCA
LEVEL SENSOR
WEIGHTING
(NOISE REDUCTION)
DE-
EMI
Hi-Fi
NORMAL
REC
PB
LPF
HOLD
HOLD
LPF
ENV DET
FM DEMODULAT
DOC DET
NORMAL
REC
Hi-Fi
PB
FM DEMODULAT
REC
PB
EMPHA I
DE-EMPHA I
LPF
CCA
LEVEL SENSOR
WEIGHTING
(NOISE REDUCTION)
36 37 38 39 42 40
31 47 34 21 53 13 12 11 10 7 9 63
MUTE(H)
Hi-Fi(L)
P4201 PACK PIN 1 1
(FROM MAIN) NORMAL AUDIO
Q4202
+14V
Q4203
Q4204
J4202
D4202
P4202 PACK PIN 13 13
P4202 PACK PIN 10 10
P4202 PACK PIN 9 9
P4202 PACK PIN 11 11
P4203 PACK PIN 20 20
※1
(TO IC6001(54)) PB Hi-Fi AUDIO (H)
(FROM IC6001(1)) Hi-Fi (H)/NORMAL (L)
(FROM IC6001(6)) AUDIO MUTE (H)
(FROM IC6001(36)) INPUT SELECT 1
(FROM IC6001(30)) INPUT SELECT 2
(FOR MODEL PV-4351/PV-4351-K/PV-4358)
P4102 P7502 9 9
P4102 P7502 13 13
P6001 P7501 8 8
P6001 P7501 7 7
(TO IC7501(12)) PB Hi-Fi AUDIO (H)
(FROM IC7501(51)) Hi-Fi (H)/NORMAL (L)
(FROM IC6001(7)) Hi-Fi AUDIO MUTE (H)
(FROM IC7501(54)) INPUT SELECT 1
(FROM IC7501(53)) INPUT SELECT 2
(FOR MODEL PV-4355S)


DE-EMPHA II
LEVEL SENSOR
WEIGHTING
CA
REC -ON
PB
REC
EMPHA II
E DUCTION)
PB
PF
ENV DET
FM DEMODULATOR
DOC DET
LPF
LPF
FM MODULATOR
VCC
VCC
+9V
+5V
MM
X2
FM DEMODULATOR
FM MODULATOR
EMPHA II
CCA
LEVEL SENSOR
WEIGHTING
DE-EMPHA II
VIDEO EE(H)
FL4201
1.3MHz BPF
1.7MHz BPF
TP4210
TP4211
P4203 17 PACK PIN 17 P3001 9 P3501 9
(FOR MODEL PV-4351/PV-4351-K/PV-4358)
(FROM IC6001(35)) VIDEO DELAY REC (H)
(FROM IC6001(37)) Hi-Fi AUDIO HEAD SW
(FROM IC6001(34)) VIDEO DELAY REC (H)
(FROM IC6001(28)) Hi-Fi AUDIO HEAD SW
(FOR MODEL PV-4355S)
P3001 10 P3501 10
P4202 8 PACK PIN 8
P3001 11 P3501 11
P4203 15 PACK PIN 15 P3001 8 P3501 8
R4204
R4205
R4204
AUDIO MUTING
HEAD AMP CIRCUIT
IC4401
REC AGC
LPF
AGC DET
REC AMP
PB-ON
REC-ON
+5V
SWITCH CONTROL
REC-ON
BUFFER
PRE AMP
PRE AMP
R4418
TP4401
TP4404
R4417
TP4402
P3503 3
P3503 2
P3503 1
Hi-Fi AUDIO HEAD L-CH
Hi-Fi AUDIO HEAD R-CH
(TO IC6001(54)) PB Hi-Fi AUDIO (H)
(FROM IC6001(1)) Hi-Fi (H)/NORMAL (L)
(FROM IC6001(6)) AUDIO MUTE (H)
(FROM IC6001(36)) INPUT SELECT 1
(FROM IC6001(30)) INPUT SELECT 2
ODEL PV-4351/PV-4351-K/PV-4358)
P4203 19 PACK PIN 19
P4202 14 PACK PIN 14
TP4205
(FROM IC6001(12)) VIDEO EE (H)
P7502 9
P7502 13
P7501 8
P7501 7
(TO IC7501(12)) PB Hi-Fi AUDIO (H)
(FROM IC7501(51)) Hi-Fi (H)/NORMAL (L)
(FROM IC6001(7)) Hi-Fi AUDIO MUTE (H)
(FROM IC7501(54)) INPUT SELECT 1
(FROM IC7501(53)) INPUT SELECT 2
MODEL PV-4355S)

※1: INPUT SELECT

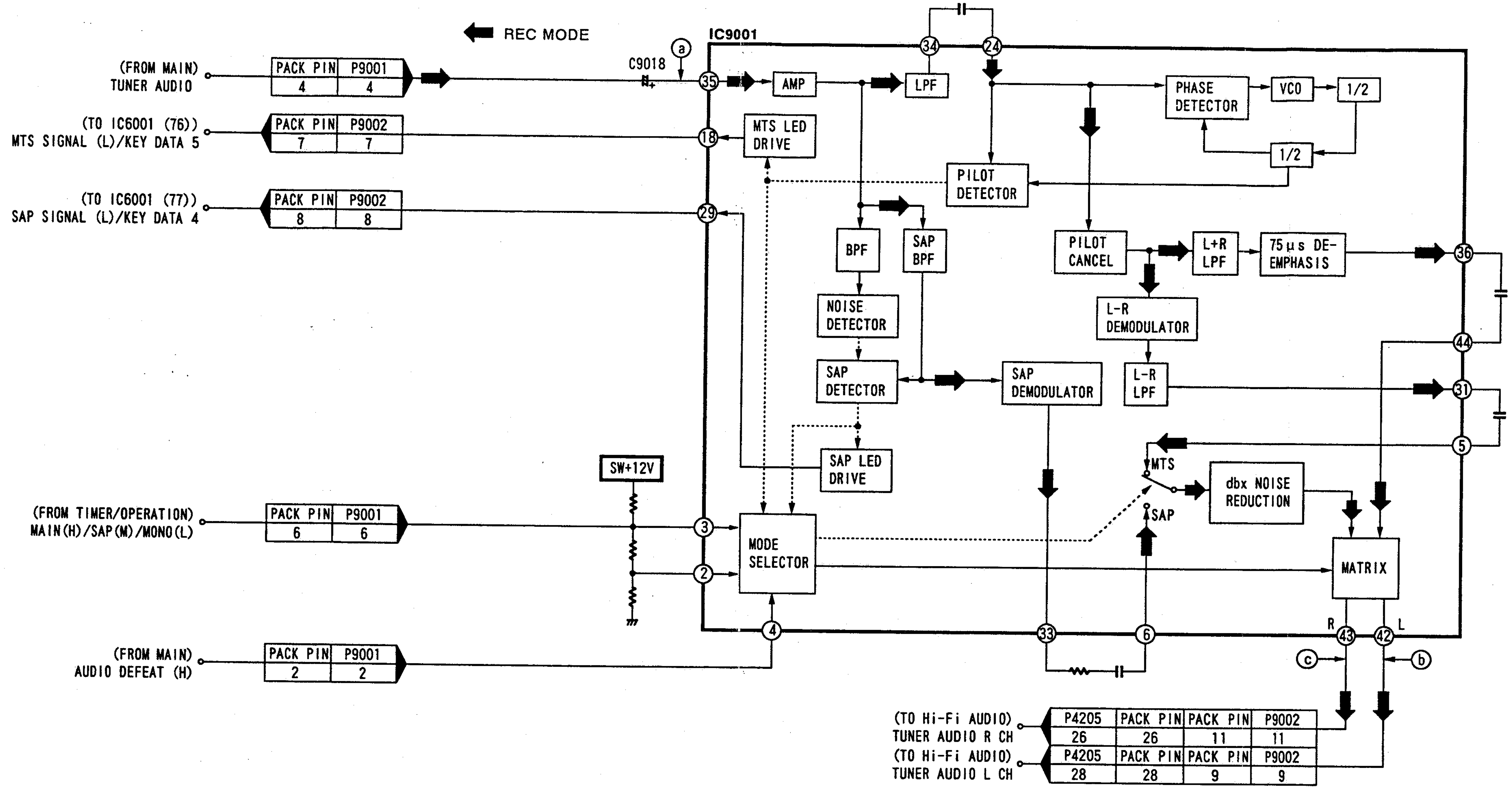
MODE \ SIGNAL	TUNER	SIMUL CAST	LINE 1	LINE 2
INPUT SELECT 1	L	L	H	H
INPUT SELECT 2	L	H	H	L

WAVEFORM OF Hi-Fi AUDIO STAGE

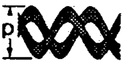
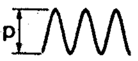
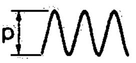
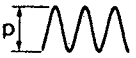
NO	WAVEFORM	NOTE	NO	WAVEFORM	NOTE	NO	WAVEFORM	NOTE	NO	WAVEFORM	NOTE
Ⓐ	0.23Vp-p	REC MODE	Ⓑ	0.23Vp-p	REC MODE	Ⓒ	0.41Vp-p	L-CH REC SIGNAL	Ⓓ	0.25Vp-p	R-CH REC SIGNAL
Ⓔ	0.11Vp-p	P.B SIGNAL	Ⓕ	5Vp-p	HEAD SW	Ⓖ	1.0Vp-p	REC/PB MODE	Ⓗ	1.0Vp-p	REC/PB MODE
Ⓘ	1.1Vp-p	REC/PB MODE									

NOTE: PLEASE USE BLANK BRACKETS TO NOTE ADDITIONAL INFORMATION.

MTS/SAP BLOCK DIAGRAM (FOR MODEL PV-4351)

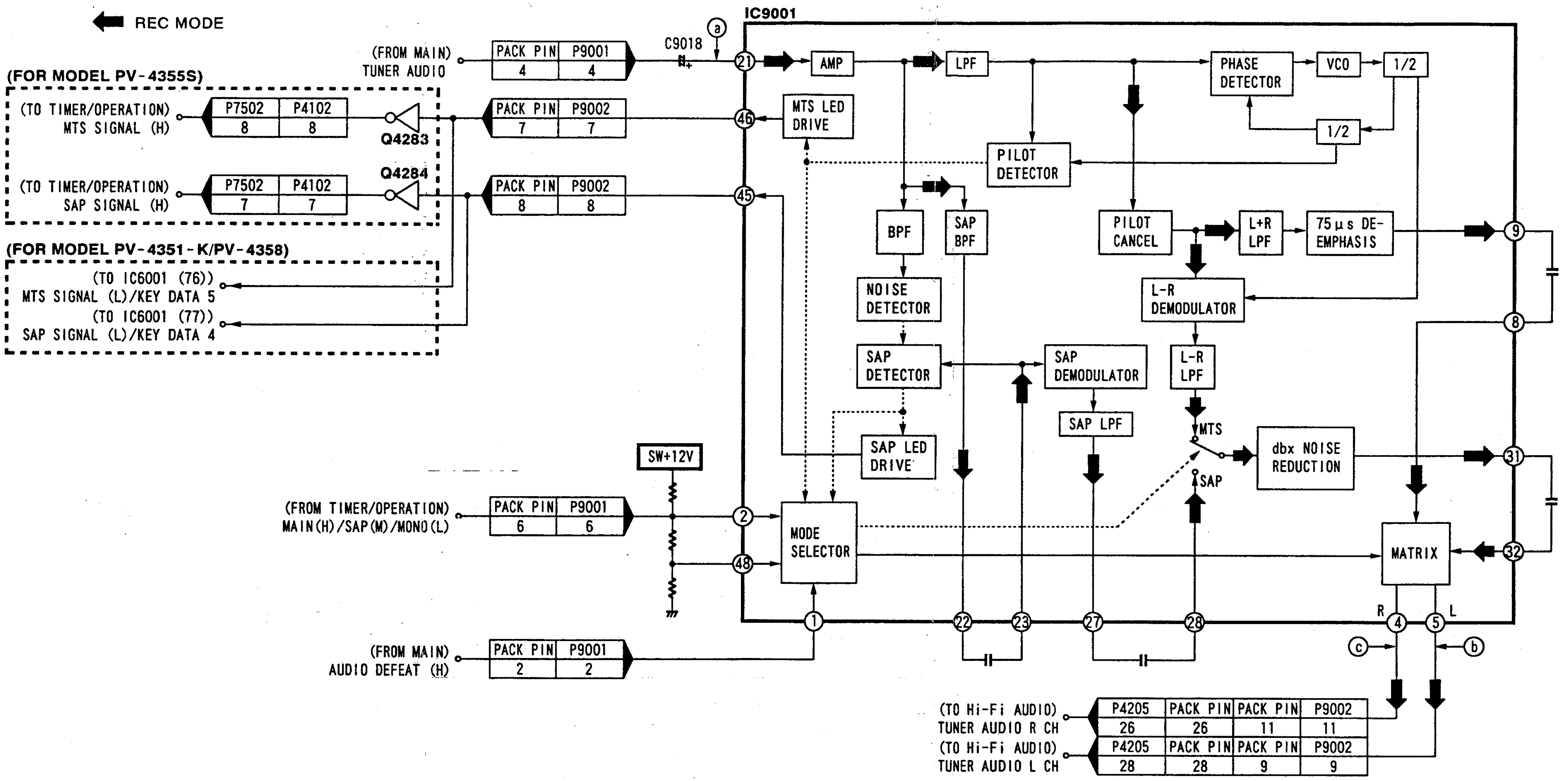

REC MODE
IC9001
C9018
ⓐ
(FROM MAIN) TUNER AUDIO
PACK PIN 4
P9001 4
(TO IC6001 (76)) MTS SIGNAL (L)/KEY DATA 5
PACK PIN 7
P9002 7
(TO IC6001 (77)) SAP SIGNAL (L)/KEY DATA 4
PACK PIN 8
P9002 8
(FROM TIMER/OPERATION) MAIN(H)/SAP(M)/MONO(L)
PACK PIN 6
P9001 6
(FROM MAIN) AUDIO DEFEAT (H)
PACK PIN 2
P9001 2
SW+12V
AMP
LPF
MTS LED DRIVE
PILOT DETECTOR
PHASE DETECTOR
VCO
1/2
1/2
BPF
SAP BPF
NOISE DETECTOR
SAP DETECTOR
SAP LED DRIVE
PILOT CANCEL
L+R LPF
75μs DE-EMPHASIS
L-R DEMODULATOR
L-R LPF
SAP DEMODULATOR
MTS
SAP
dbx NOISE REDUCTION
MODE SELECTOR
MATRIX
R
L
ⓑ
ⓒ
㉞ ㉔ ㉟ ⑱ ㉙ ③ ② ④ ㉝ ⑥ ㊸ ㊷ ㊱ ㊹ ㉛ ⑤
(TO Hi-Fi AUDIO) TUNER AUDIO R CH
P4205 26
PACK PIN 26
PACK PIN 11
P9002 11
(TO Hi-Fi AUDIO) TUNER AUDIO L CH
P4205 28
PACK PIN 28
PACK PIN 9
P9002 9

WAVEFORM OF MTS/SAP STAGE

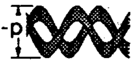
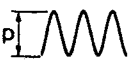
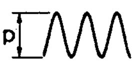
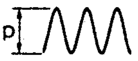
NO	WAVEFORM	NOTE	NO	WAVEFORM	NOTE	NO	WAVEFORM	NOTE	NO	WAVEFORM	NOTE
ⓐ	0.19Vp-p 	MTS L CH (300Hz)	ⓑ	0.2Vp-p 	MTS L CH (300Hz)	ⓑ	0.1Vp-p 	SAP (300Hz)			
			ⓒ			ⓒ	0.1Vp-p 				

NOTE : PLEASE USE BLANK BRACKETS TO NOTE ADDITIONAL INFORMATION.

MTS/SAP BLOCK DIAGRAM (FOR MODEL PV-4351-K/PV-4358/PV-4355S)

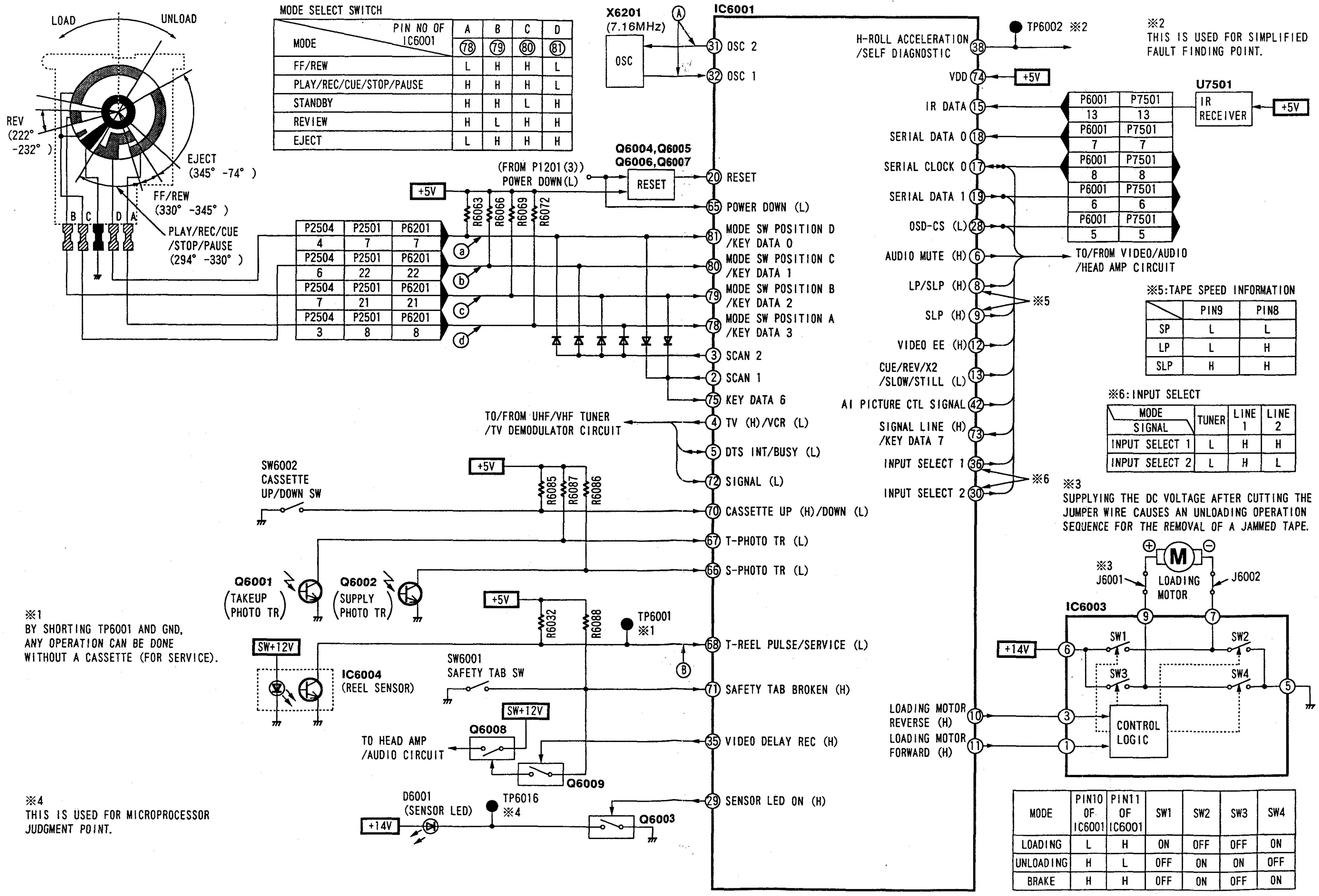

REC MODE
(FOR MODEL PV-4355S)
(TO TIMER/OPERATION) MTS SIGNAL (H)
P7502 8
P4102 8
Q4283
Q4284
(TO TIMER/OPERATION) SAP SIGNAL (H)
P7502 7
P4102 7
(FOR MODEL PV-4351-K/PV-4358)
(TO IC6001 (76)) MTS SIGNAL (L)/KEY DATA 5
(TO IC6001 (77)) SAP SIGNAL (L)/KEY DATA 4
(FROM MAIN) TUNER AUDIO
PACK PIN 4
P9001 4
PACK PIN 7
P9002 7
PACK PIN 8
P9002 8
C9018
ⓐ
IC9001
AMP
LPF
PHASE DETECTOR
VCO
1/2
1/2
MTS LED DRIVE
PILOT DETECTOR
BPF
SAP BPF
PILOT CANCEL
L+R LPF
75μs DE-EMPHASIS
NOISE DETECTOR
L-R DEMODULATOR
SAP DETECTOR
SAP DEMODULATOR
L-R LPF
SAP LPF
MTS
SAP
dbx NOISE REDUCTION
SAP LED DRIVE
MODE SELECTOR
MATRIX
SW+12V
(FROM TIMER/OPERATION) MAIN(H)/SAP(M)/MONO(L)
PACK PIN 6
P9001 6
(FROM MAIN) AUDIO DEFEAT (H)
PACK PIN 2
P9001 2
㉑
㊻
㊺
②
㊽
①
㉒
㉓
㉗
㉘
⑨
⑧
㉛
㉜
R
L
④
⑤
ⓒ
ⓑ
(TO Hi-Fi AUDIO) TUNER AUDIO R CH
P4205 26
PACK PIN 26
PACK PIN 11
P9002 11
(TO Hi-Fi AUDIO) TUNER AUDIO L CH
P4205 28
PACK PIN 28
PACK PIN 9
P9002 9

WAVEFORM OF MTS/SAP STAGE

NO	WAVEFORM	NOTE	NO	WAVEFORM	NOTE	NO	WAVEFORM	NOTE	NO	WAVEFORM	NOTE
ⓐ	0.19Vp-p 	MTS L CH (300Hz)	ⓑ	0.2Vp-p 	MTS L CH (300Hz)	ⓑ	0.1Vp-p 	SAP (300Hz)			
			ⓒ			ⓒ	0.1Vp-p 				

NOTE : PLEASE USE BLANK BRACKETS TO NOTE ADDITIONAL INFORMATION.

SYSTEM CONTROL/TIMER BLOCK DIAGRAM (FOR MODEL PV-4308/PV-4311/PV-4311-K/PV-4315S)


LOAD
UNLOAD
REV
(222°
-232°)
EJECT
(345° -74°)
FF/REW
(330° -345°)
PLAY/REC/CUE
/STOP/PAUSE
(294° -330°)
B C D A
MODE SELECT SWITCH
P2504 4 P2501 7 P6201 7
P2504 6 P2501 22 P6201 22
P2504 7 P2501 21 P6201 21
P2504 3 P2501 8 P6201 8
ⓐ ⓑ ⓒ ⓓ
X6201
(7.16MHz)
OSC
Ⓐ
IC6001
(31) OSC 2
(32) OSC 1
(FROM P1201(3))
POWER DOWN(L)
Q6004,Q6005
Q6006,Q6007
RESET
+5V
R6063 R6066 R6069 R6072
(20) RESET
(65) POWER DOWN (L)
(81) MODE SW POSITION D /KEY DATA 0
(80) MODE SW POSITION C /KEY DATA 1
(79) MODE SW POSITION B /KEY DATA 2
(78) MODE SW POSITION A /KEY DATA 3
③ SCAN 2
② SCAN 1
(75) KEY DATA 6
TO/FROM UHF/VHF TUNER
/TV DEMODULATOR CIRCUIT
④ TV (H)/VCR (L)
⑤ DTS INT/BUSY (L)
(72) SIGNAL (L)
SW6002
CASSETTE
UP/DOWN SW
+5V
R6085 R6087 R6086
(70) CASSETTE UP (H)/DOWN (L)
(67) T-PHOTO TR (L)
(66) S-PHOTO TR (L)
Q6001
(TAKEUP PHOTO TR)
Q6002
(SUPPLY PHOTO TR)
+5V
R6032 R6088
TP6001
※1
SW+12V
(68) T-REEL PULSE/SERVICE (L)
Ⓑ
IC6004
(REEL SENSOR)
SW6001
SAFETY TAB SW
(71) SAFETY TAB BROKEN (H)
SW+12V
Q6008
TO HEAD AMP
/AUDIO CIRCUIT
Q6009
(35) VIDEO DELAY REC (H)
D6001
(SENSOR LED)
TP6016
※4
+14V
Q6003
(29) SENSOR LED ON (H)
TP6002 ※2
H-ROLL ACCELERATION /SELF DIAGNOSTIC (38)
VDD (74)
+5V
IR DATA ⑮
SERIAL DATA 0 ⑱
SERIAL CLOCK 0 ⑰
SERIAL DATA 1 ⑲
OSD-CS (L) (28)
AUDIO MUTE (H) ⑥
LP/SLP (H) ⑧
SLP (H) ⑨
VIDEO EE (H) ⑫
CUE/REV/X2 /SLOW/STILL (L) ⑬
AI PICTURE CTL SIGNAL (42)
SIGNAL LINE (H) /KEY DATA 7 (73)
INPUT SELECT 1 (36)
INPUT SELECT 2 (30)
※5
※6
P6001 13 P7501 13
P6001 7 P7501 7
P6001 8 P7501 8
P6001 6 P7501 6
P6001 5 P7501 5
U7501
IR RECEIVER
+5V
TO/FROM VIDEO/AUDIO
/HEAD AMP CIRCUIT
LOADING MOTOR REVERSE (H) ⑩
LOADING MOTOR FORWARD (H) ⑪
⊕ M ⊖
※3
J6001
LOADING MOTOR
J6002
IC6003
⑨ ⑦
+14V
⑥ ③ ① ⑤
SW1 SW2 SW3 SW4
CONTROL LOGIC

MODE SELECT SWITCH

MODE \ PIN NO OF IC6001	A (78)	B (79)	C (80)	D (81)
FF/REW	L	H	H	L
PLAY/REC/CUE/STOP/PAUSE	H	H	H	L
STANDBY	H	H	L	H
REVIEW	H	L	H	H
EJECT	L	H	H	H

※1
BY SHORTING TP6001 AND GND,
ANY OPERATION CAN BE DONE
WITHOUT A CASSETTE (FOR SERVICE).

※2
THIS IS USED FOR SIMPLIFIED
FAULT FINDING POINT.

※3
SUPPLYING THE DC VOLTAGE AFTER CUTTING THE JUMPER WIRE CAUSES AN UNLOADING OPERATION SEQUENCE FOR THE REMOVAL OF A JAMMED TAPE.

※4
THIS IS USED FOR MICROPROCESSOR
JUDGMENT POINT.

※5:TAPE SPEED INFORMATION

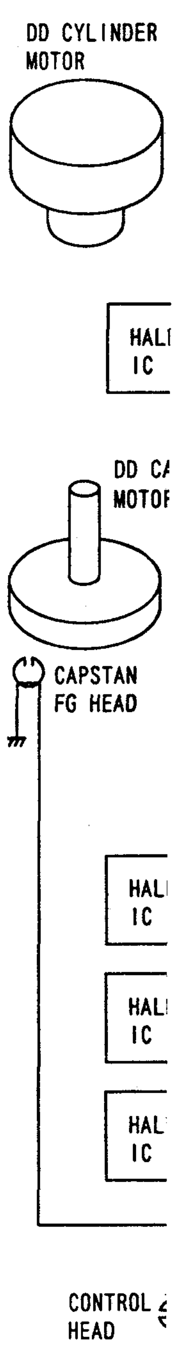
	PIN9	PIN8
SP	L	L
LP	L	H
SLP	H	H

※6:INPUT SELECT

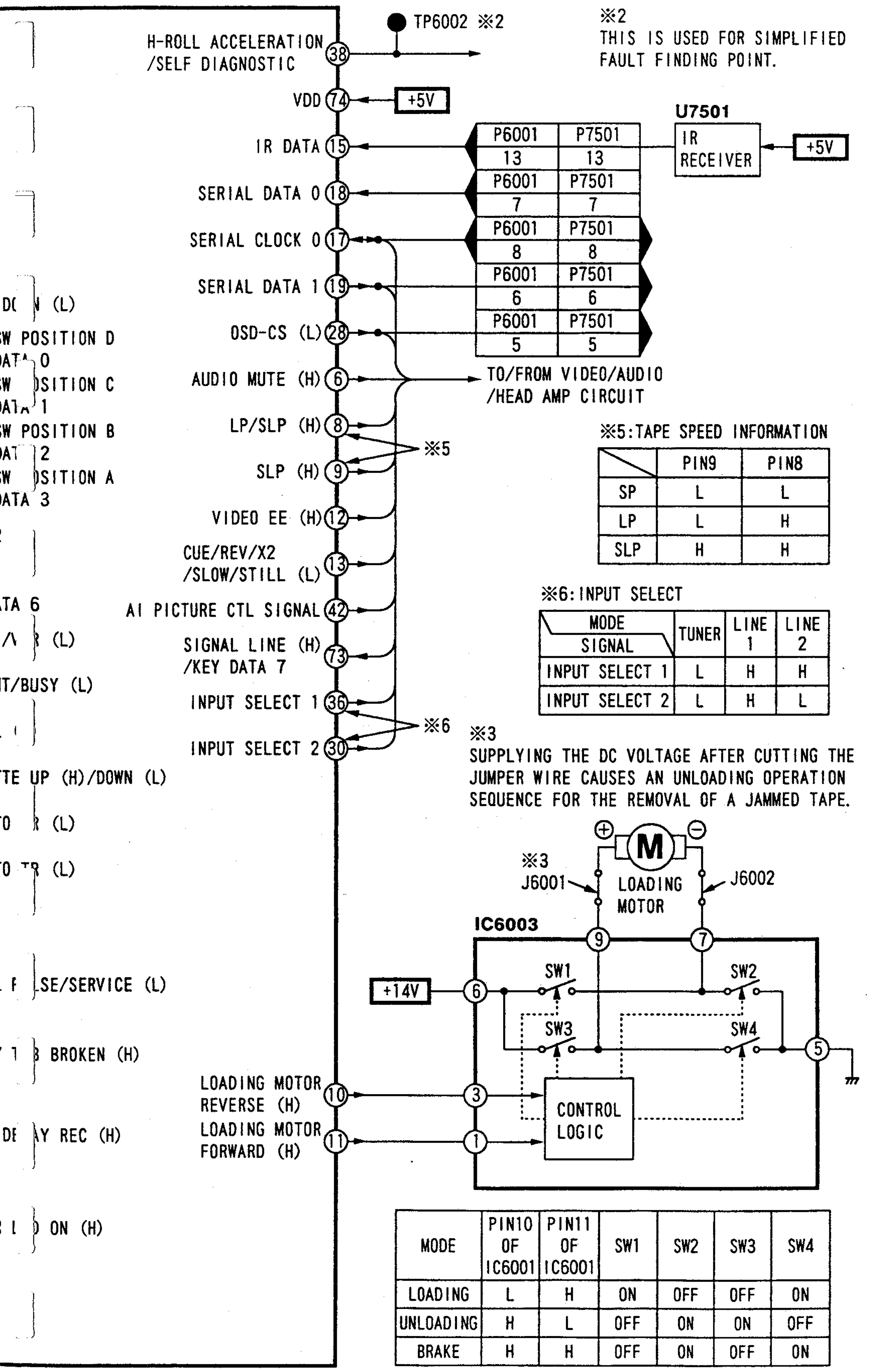
MODE \ SIGNAL	TUNER	LINE 1	LINE 2
INPUT SELECT 1	L	H	H
INPUT SELECT 2	L	H	L

MODE	PIN10 OF IC6001	PIN11 OF IC6001	SW1	SW2	SW3	SW4
LOADING	L	H	ON	OFF	OFF	ON
UNLOADING	H	L	OFF	ON	ON	OFF
BRAKE	H	H	OFF	ON	OFF	ON

SERVO
(FOR M


DD CYLINDER
MOTOR
HALL
IC
DD CA
MOTOR
CAPSTAN
FG HEAD
HALL
IC
HALL
IC
HALL
IC
CONTROL
HEAD

0 /PV-4311/PV-4311-K/PV-4315S)


H-ROLL ACCELERATION /SELF DIAGNOSTIC 38
TP6002 ※2
VDD 74
+5V
IR DATA 15
SERIAL DATA 0 18
SERIAL CLOCK 0 17
SERIAL DATA 1 19
OSD-CS (L) 28
AUDIO MUTE (H) 6
LP/SLP (H) 8
SLP (H) 9
VIDEO EE (H) 12
CUE/REV/X2 /SLOW/STILL (L) 13
AI PICTURE CTL SIGNAL 42
SIGNAL LINE (H) /KEY DATA 7 73
INPUT SELECT 1 36
INPUT SELECT 2 30
※5
※6
P6001 13
P7501 13
P6001 7
P7501 7
P6001 8
P7501 8
P6001 6
P7501 6
P6001 5
P7501 5
U7501
IR RECEIVER
+5V
TO/FROM VIDEO/AUDIO /HEAD AMP CIRCUIT
LOADING MOTOR REVERSE (H) 10
LOADING MOTOR FORWARD (H) 11
+14V
IC6003
J6001
J6002
LOADING MOTOR
M
SW1
SW2
SW3
SW4
CONTROL LOGIC
(L)
W POSITION D
DATA 0
W POSITION C
DATA 1
W POSITION B
DATA 2
W POSITION A
DATA 3
TA 6
(L)
T/BUSY (L)
TE UP (H)/DOWN (L)
(L)
(L)
SE/SERVICE (L)
BROKEN (H)
Y REC (H)
ON (H)

※2
THIS IS USED FOR SIMPLIFIED FAULT FINDING POINT.

※5:TAPE SPEED INFORMATION

	PIN9	PIN8
SP	L	L
LP	L	H
SLP	H	H

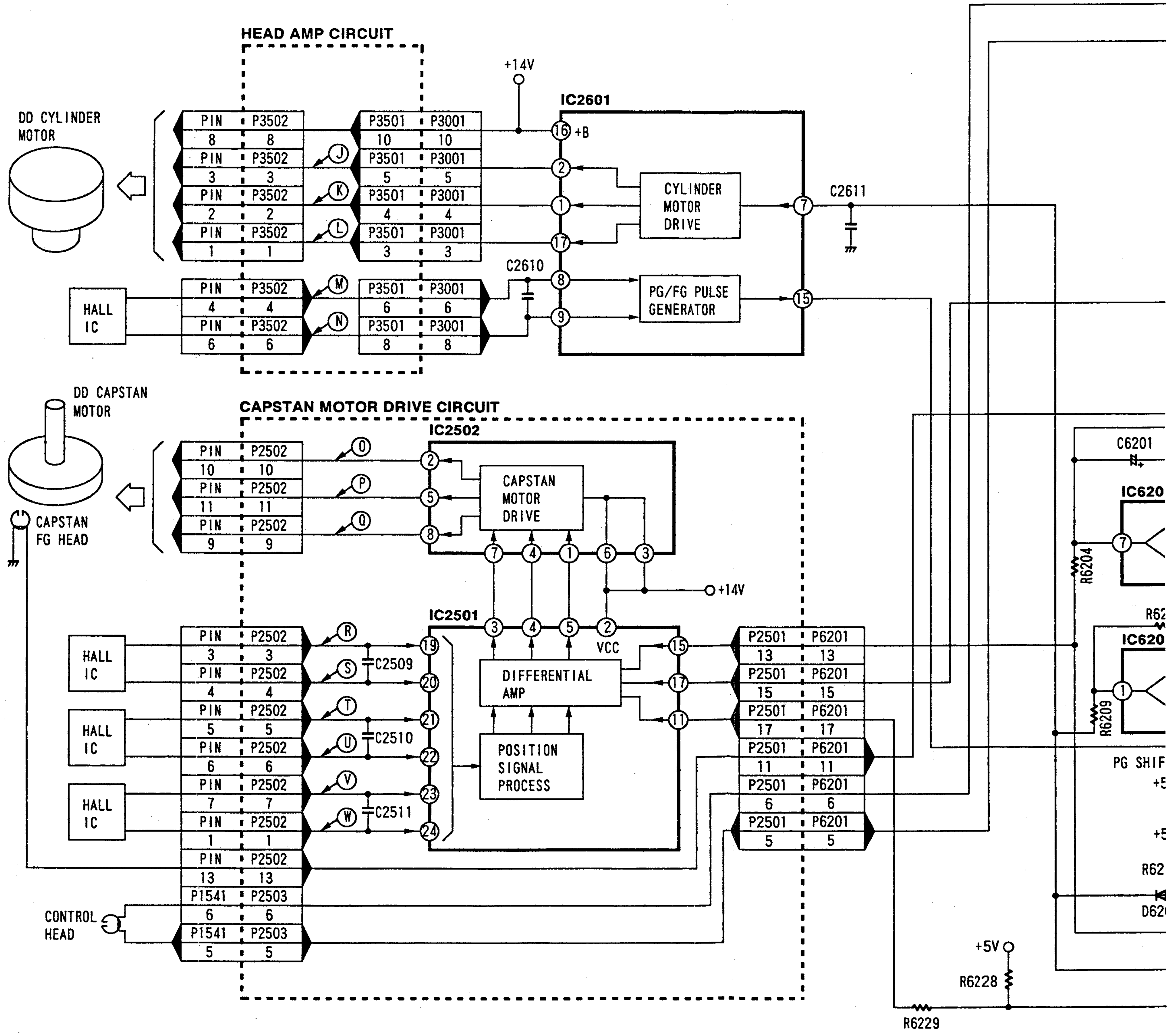
※6:INPUT SELECT

MODE / SIGNAL	TUNER	LINE 1	LINE 2
INPUT SELECT 1	L	H	H
INPUT SELECT 2	L	H	L

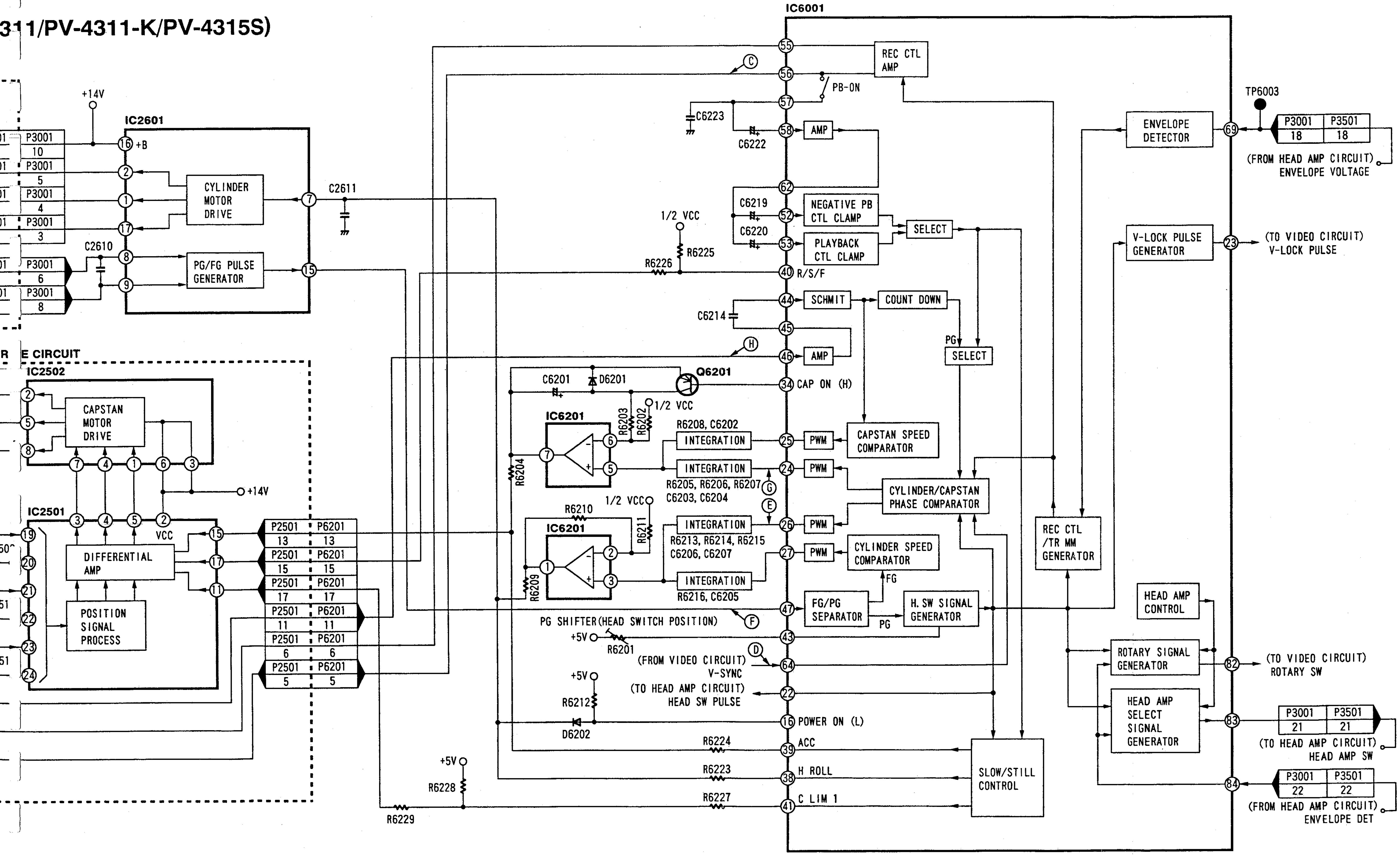
※3
SUPPLYING THE DC VOLTAGE AFTER CUTTING THE JUMPER WIRE CAUSES AN UNLOADING OPERATION SEQUENCE FOR THE REMOVAL OF A JAMMED TAPE.

MODE	PIN10 OF IC6001	PIN11 OF IC6001	SW1	SW2	SW3	SW4
LOADING	L	H	ON	OFF	OFF	ON
UNLOADING	H	L	OFF	ON	ON	OFF
BRAKE	H	H	OFF	ON	OFF	ON

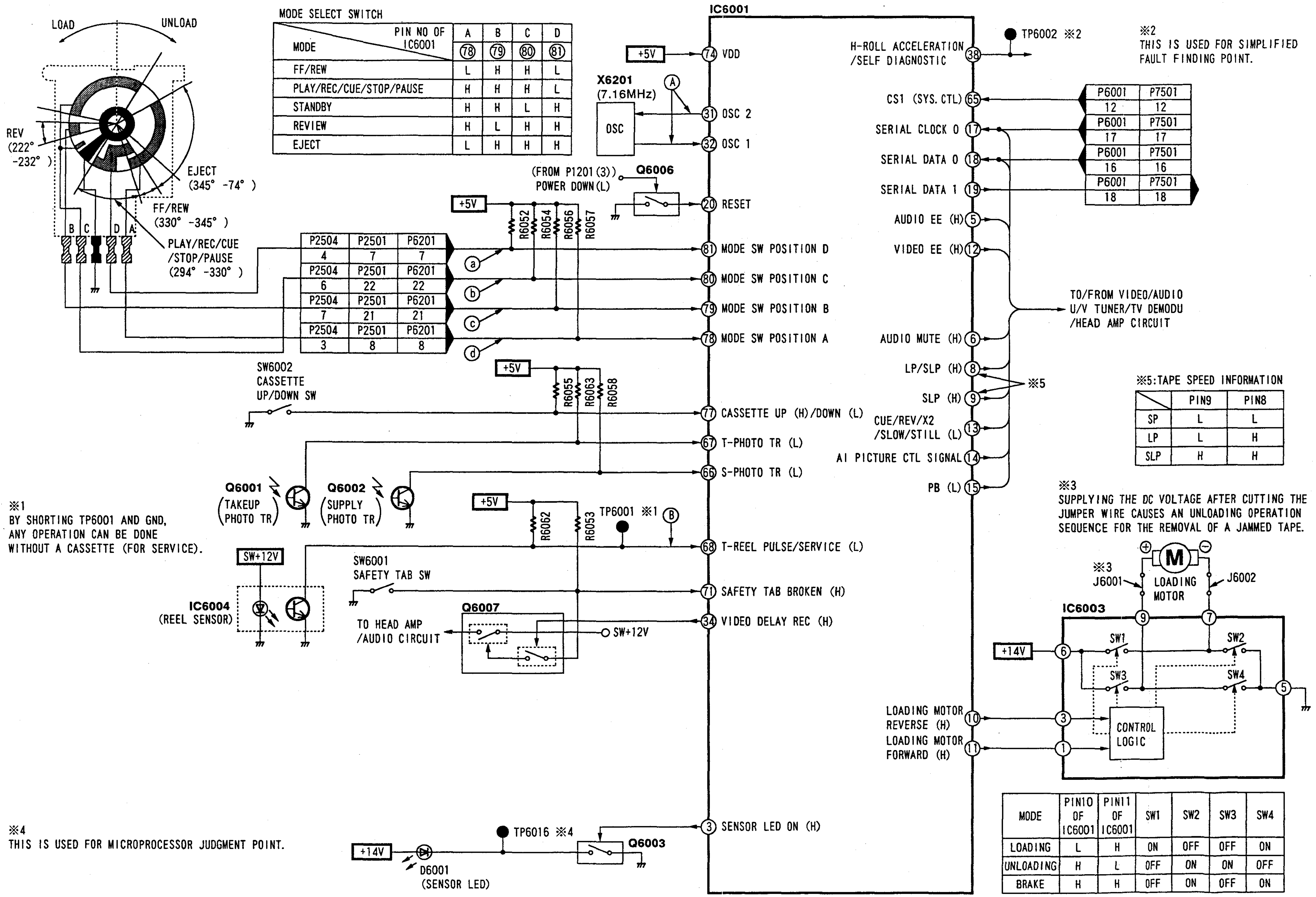
SERVO BLOCK DIAGRAM
(FOR MODEL PV-4308/PV-4311/PV-4311-K/PV-4315S)


HEAD AMP CIRCUIT
DD CYLINDER MOTOR
HALL IC
PIN 8 P3502 8
PIN 3 P3502 3
PIN 2 P3502 2
PIN 1 P3502 1
PIN 4 P3502 4
PIN 6 P3502 6
J
K
L
M
N
P3501 10 P3001 10
P3501 5 P3001 5
P3501 4 P3001 4
P3501 3 P3001 3
P3501 6 P3001 6
P3501 8 P3001 8
+14V
IC2601
+B
CYLINDER MOTOR DRIVE
PG/FG PULSE GENERATOR
C2610
C2611
DD CAPSTAN MOTOR
CAPSTAN FG HEAD
CAPSTAN MOTOR DRIVE CIRCUIT
IC2502
CAPSTAN MOTOR DRIVE
PIN 10 P2502 10
PIN 11 P2502 11
PIN 9 P2502 9
O
P
Q
+14V
IC2501
VCC
DIFFERENTIAL AMP
POSITION SIGNAL PROCESS
HALL IC
HALL IC
HALL IC
PIN 3 P2502 3
PIN 4 P2502 4
PIN 5 P2502 5
PIN 6 P2502 6
PIN 7 P2502 7
PIN 1 P2502 1
PIN 13 P2502 13
R
S
T
U
V
W
C2509
C2510
C2511
CONTROL HEAD
P1541 6 P2503 6
P1541 5 P2503 5
P2501 13 P6201 13
P2501 15 P6201 15
P2501 17 P6201 17
P2501 11 P6201 11
P2501 6 P6201 6
P2501 5 P6201 5
C6201
IC620
R6204
IC620
R6209
PG SHIF
+5
+5
R62
D62
+5V
R6228
R6229

311/PV-4311-K/PV-4315S)


IC6001
REC CTL AMP
PB-ON
C6223
C6222
AMP
NEGATIVE PB CTL CLAMP
PLAYBACK CTL CLAMP
SELECT
C6219
C6220
1/2 VCC
R6225
R6226
R/S/F
SCHMIT
COUNT DOWN
C6214
PG
SELECT
AMP
C6201
D6201
Q6201
CAP ON (H)
IC6201
R6203
R6202
1/2 VCC
R6208, C6202
INTEGRATION
PWM
CAPSTAN SPEED COMPARATOR
R6204
INTEGRATION
R6205, R6206, R6207
C6203, C6204
CYLINDER/CAPSTAN PHASE COMPARATOR
1/2 VCC
R6210
R6211
IC6201
INTEGRATION
R6213, R6214, R6215
C6206, C6207
CYLINDER SPEED COMPARATOR
FG
R6209
INTEGRATION
R6216, C6205
FG/PG SEPARATOR
PG
H. SW SIGNAL GENERATOR
PG SHIFTER(HEAD SWITCH POSITION)
+5V
R6201
(FROM VIDEO CIRCUIT) V-SYNC
(TO HEAD AMP CIRCUIT) HEAD SW PULSE
+5V
R6212
D6202
POWER ON (L)
R6224
ACC
R6223
H ROLL
R6227
C LIM 1
SLOW/STILL CONTROL
+5V
R6228
R6229
TP6003
ENVELOPE DETECTOR
P3001 18
P3501 18
(FROM HEAD AMP CIRCUIT) ENVELOPE VOLTAGE
V-LOCK PULSE GENERATOR
(TO VIDEO CIRCUIT) V-LOCK PULSE
REC CTL /TR MM GENERATOR
HEAD AMP CONTROL
ROTARY SIGNAL GENERATOR
(TO VIDEO CIRCUIT) ROTARY SW
HEAD AMP SELECT SIGNAL GENERATOR
P3001 21
P3501 21
(TO HEAD AMP CIRCUIT) HEAD AMP SW
P3001 22
P3501 22
(FROM HEAD AMP CIRCUIT) ENVELOPE DET
55 56 57 58 62 52 53 40 44 45 46 34 25 24 26 27 47 43 64 22 16 39 38 41 69 23 82 83 84
Ⓒ Ⓗ Ⓖ Ⓔ Ⓕ Ⓓ
+14V
IC2601
+B
P3001 10
P3001 5
P3001 4
P3001 3
P3001 6
P3001 8
CYLINDER MOTOR DRIVE
PG/FG PULSE GENERATOR
C2610
C2611
R E CIRCUIT
IC2502
CAPSTAN MOTOR DRIVE
+14V
IC2501
VCC
DIFFERENTIAL AMP
POSITION SIGNAL PROCESS
P2501 13 P6201 13
P2501 15 P6201 15
P2501 17 P6201 17
P2501 11 P6201 11
P2501 6 P6201 6
P2501 5 P6201 5

SYSTEM CONTROL BLOCK DIAGRAM (FOR MODEL PV-4325S)


LOAD
UNLOAD
REV (222° -232°)
EJECT (345° -74°)
FF/REW (330° -345°)
PLAY/REC/CUE /STOP/PAUSE (294° -330°)
B C D A
MODE SELECT SWITCH
IC6001
+5V
74 VDD
X6201 (7.16MHz)
OSC
A
31 OSC 2
32 OSC 1
(FROM P1201 (3)) POWER DOWN (L)
Q6006
20 RESET
R6052
R6054
R6056
R6057
a
b
c
d
81 MODE SW POSITION D
80 MODE SW POSITION C
79 MODE SW POSITION B
78 MODE SW POSITION A
SW6002 CASSETTE UP/DOWN SW
R6055
R6063
R6058
77 CASSETTE UP (H)/DOWN (L)
67 T-PHOTO TR (L)
66 S-PHOTO TR (L)
Q6001 (TAKEUP PHOTO TR)
Q6002 (SUPPLY PHOTO TR)
R6062
R6053
TP6001 ※1
B
68 T-REEL PULSE/SERVICE (L)
SW+12V
IC6004 (REEL SENSOR)
SW6001 SAFETY TAB SW
71 SAFETY TAB BROKEN (H)
Q6007
TO HEAD AMP /AUDIO CIRCUIT
SW+12V
34 VIDEO DELAY REC (H)
+14V
D6001 (SENSOR LED)
TP6016 ※4
Q6003
3 SENSOR LED ON (H)
H-ROLL ACCELERATION /SELF DIAGNOSTIC 38
TP6002 ※2
CS1 (SYS. CTL) 65
SERIAL CLOCK 0 17
SERIAL DATA 0 18
SERIAL DATA 1 19
AUDIO EE (H) 5
VIDEO EE (H) 12
TO/FROM VIDEO/AUDIO U/V TUNER/TV DEMODU /HEAD AMP CIRCUIT
AUDIO MUTE (H) 6
LP/SLP (H) 8
SLP (H) 9
※5
CUE/REV/X2 /SLOW/STILL (L) 13
AI PICTURE CTL SIGNAL 14
PB (L) 15
※3
J6001
LOADING MOTOR
J6002
IC6003
+14V
6
9
7
SW1
SW2
SW3
SW4
5
3
1
CONTROL LOGIC
LOADING MOTOR REVERSE (H) 10
LOADING MOTOR FORWARD (H) 11

MODE \ PIN NO OF IC6001	A ⑱ (78)	B (79)	C (80)	D (81)
FF/REW	L	H	H	L
PLAY/REC/CUE/STOP/PAUSE	H	H	H	L
STANDBY	H	H	L	H
REVIEW	H	L	H	H
EJECT	L	H	H	H

P2504	P2501	P6201
4	7	7
6	22	22
7	21	21
3	8	8

P6001	P7501
12	12
17	17
16	16
18	18

※1
BY SHORTING TP6001 AND GND, ANY OPERATION CAN BE DONE WITHOUT A CASSETTE (FOR SERVICE).

※2
THIS IS USED FOR SIMPLIFIED FAULT FINDING POINT.

※3
SUPPLYING THE DC VOLTAGE AFTER CUTTING THE JUMPER WIRE CAUSES AN UNLOADING OPERATION SEQUENCE FOR THE REMOVAL OF A JAMMED TAPE.

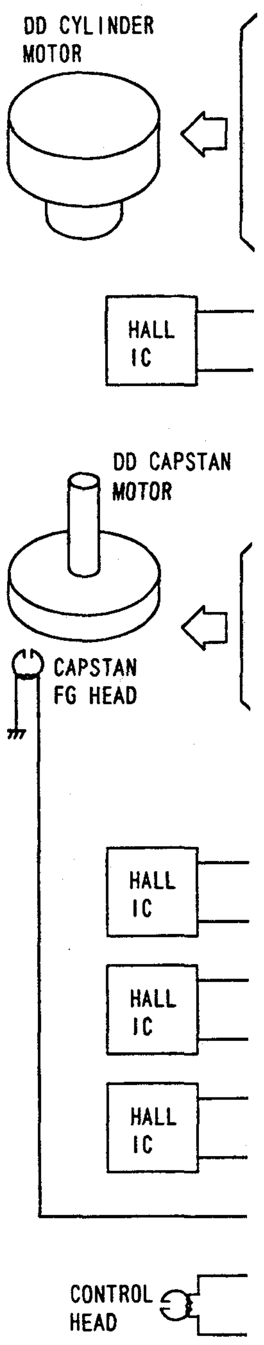
※4
THIS IS USED FOR MICROPROCESSOR JUDGMENT POINT.

※5:TAPE SPEED INFORMATION

	PIN9	PIN8
SP	L	L
LP	L	H
SLP	H	H

MODE	PIN10 OF IC6001	PIN11 OF IC6001	SW1	SW2	SW3	SW4
LOADING	L	H	ON	OFF	OFF	ON
UNLOADING	H	L	OFF	ON	ON	OFF
BRAKE	H	H	OFF	ON	OFF	ON

SERVO BL


DD CYLINDER MOTOR
HALL IC
DD CAPSTAN MOTOR
CAPSTAN FG HEAD
HALL IC
HALL IC
HALL IC
CONTROL HEAD

SERVO BLOCK DIAGRAM (FOR MODEL PV-4325S)

※2
THIS IS USED FOR SIMPLIFIED FAULT FINDING POINT.

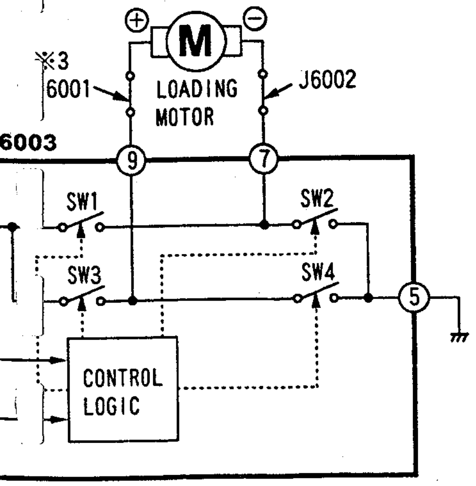
6001	P7501
12	12
P6001	P7501
17	17
6001	P7501
16	16
P6001	P7501
18	18

/F OM VIDEO/AUDIO
V UNER/TV DEMODU
HE AMP CIRCUIT

※5:TAPE SPEED INFORMATION

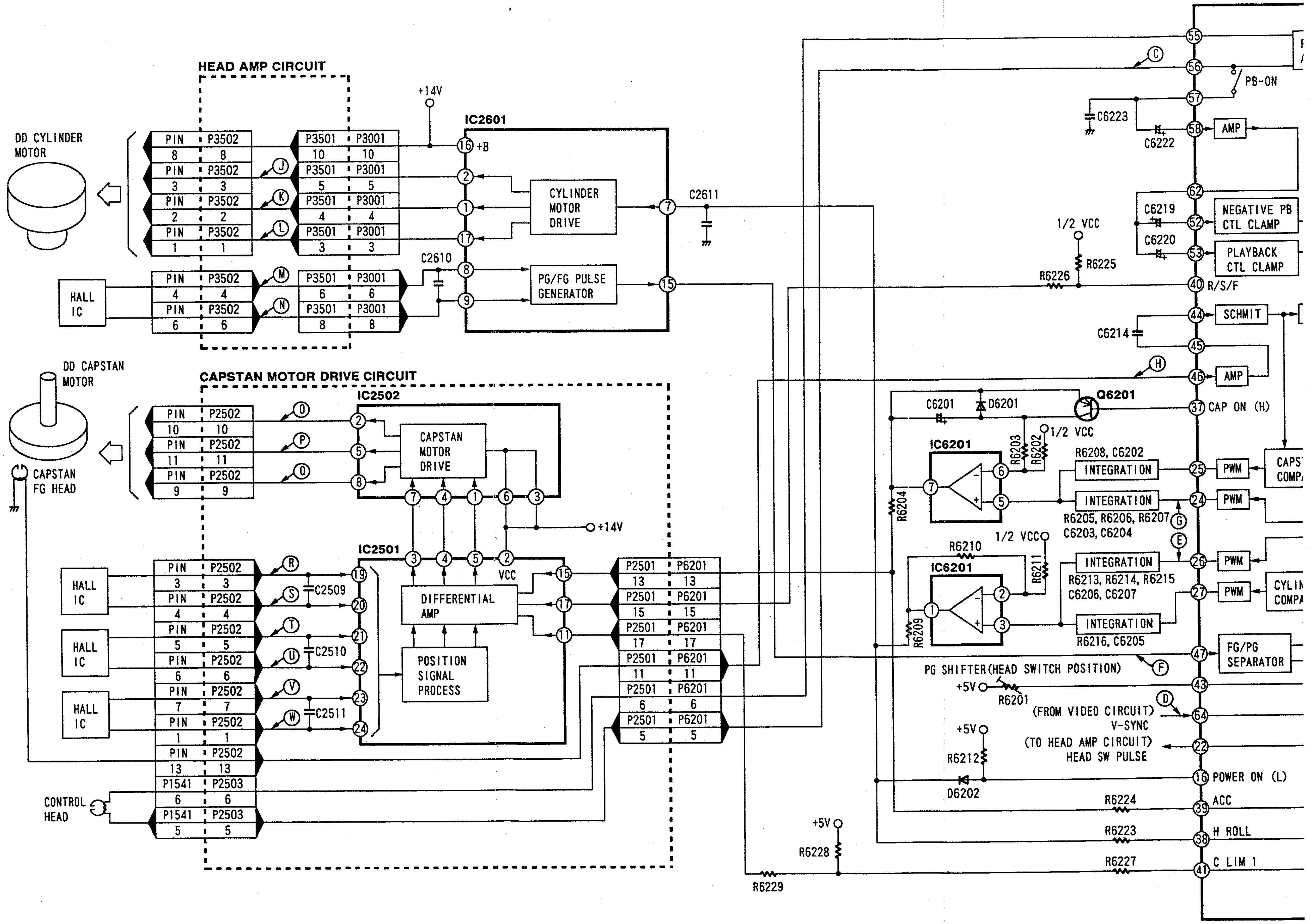
	PIN9	PIN8
SP	L	L
LP	L	H
SLP	H	H

PLYING THE DC VOLTAGE AFTER CUTTING THE PE WIRE CAUSES AN UNLOADING OPERATION UE E FOR THE REMOVAL OF A JAMMED TAPE.



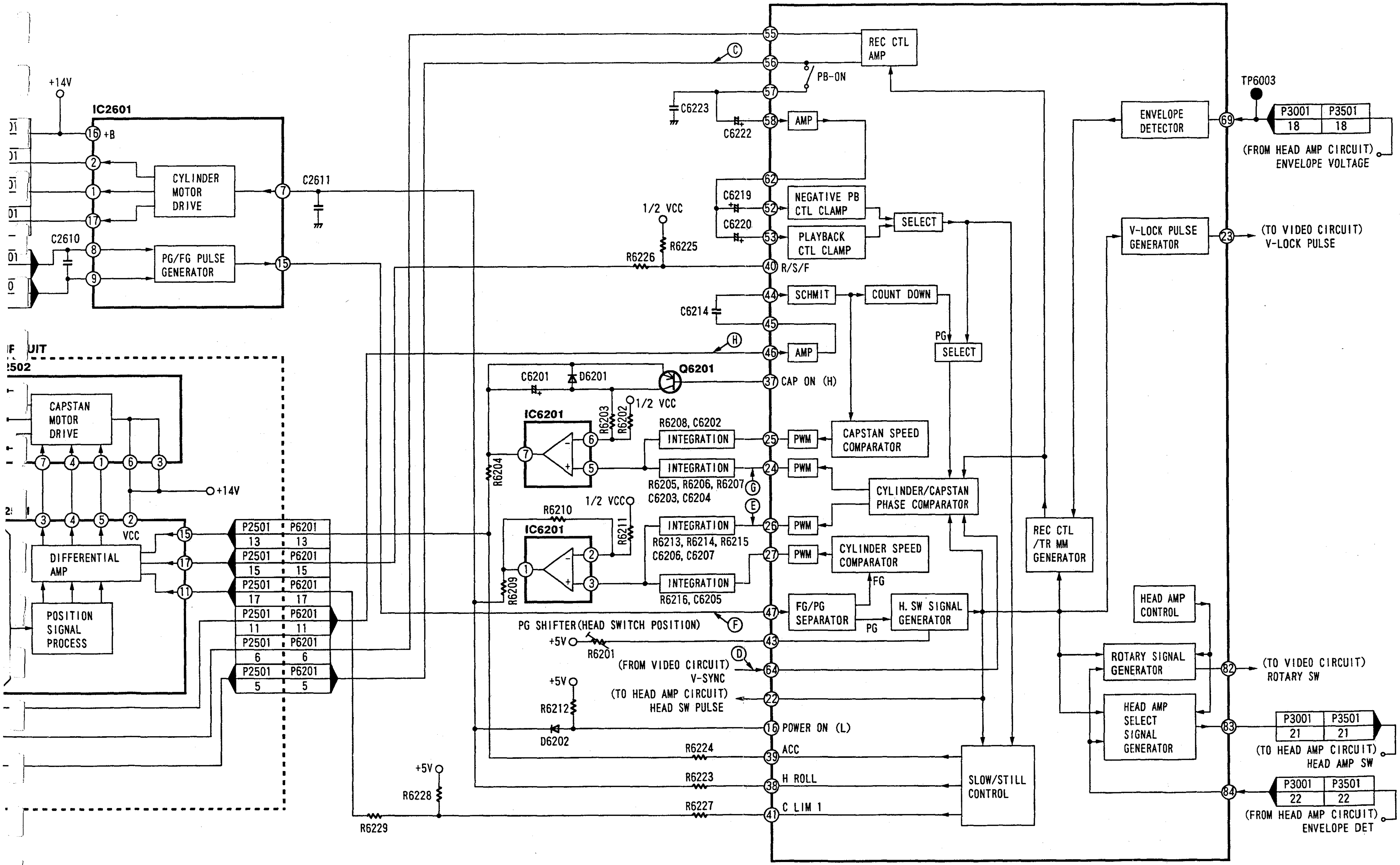
⊕
M
⊖
※3
6001
LOADING MOTOR
J6002
6003
9
7
SW1
SW2
SW3
SW4
5
CONTROL LOGIC

N' OF 6001	PIN11 OF IC6001	SW1	SW2	SW3	SW4
L	H	ON	OFF	OFF	ON
H	L	OFF	ON	ON	OFF
H	H	OFF	ON	OFF	ON

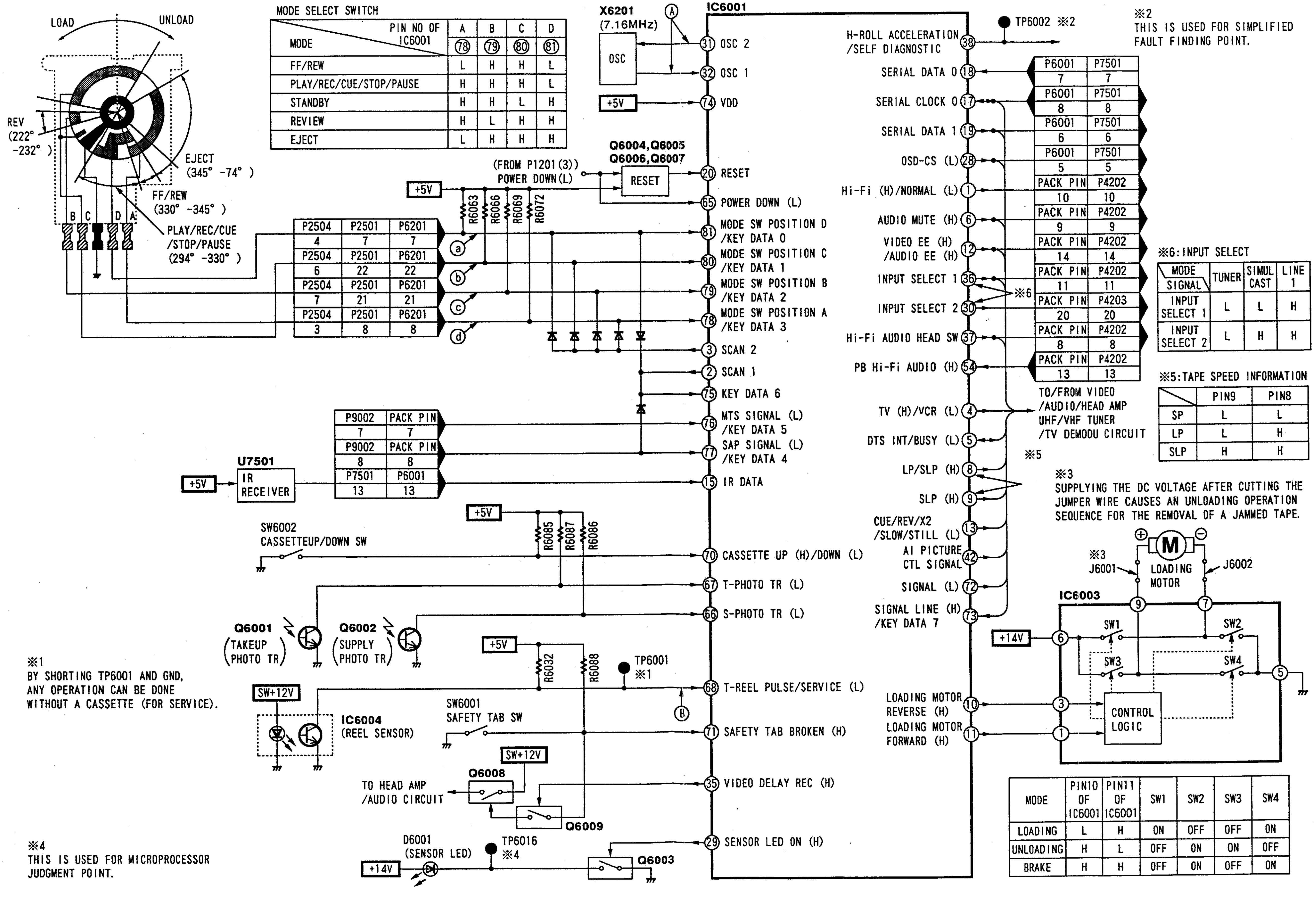


HEAD AMP CIRCUIT
DD CYLINDER MOTOR
PIN
P3502
P3501
P3001
8
3
2
1
10
5
4
J
K
L
M
N
HALL IC
4
6
+14V
IC2601
16 +B
CYLINDER MOTOR DRIVE
PG/FG PULSE GENERATOR
C2610
C2611
7
15
17
9
DD CAPSTAN MOTOR
CAPSTAN FG HEAD
CAPSTAN MOTOR DRIVE CIRCUIT
IC2502
CAPSTAN MOTOR DRIVE
P2502
10
11
9
O
P
Q
+14V
IC2501
DIFFERENTIAL AMP
POSITION SIGNAL PROCESS
VCC
R
S
T
U
V
W
C2509
C2510
C2511
19
20
21
22
23
24
13
P1541
P2503
CONTROL HEAD
P2501
P6201
IC6001
55
56
57
58
62
52
53
40 R/S/F
44
45
46
37 CAP ON (H)
25
24
26
27
47
43
64
22
16 POWER ON (L)
39 ACC
38 H ROLL
41 C LIM 1
C
PB-ON
C6223
C6222
AMP
C6219
C6220
NEGATIVE PB CTL CLAMP
PLAYBACK CTL CLAMP
1/2 VCC
R6225
R6226
SCHMIT
C6214
H
C6201
D6201
Q6201
R6203
R6202
IC6201
R6204
R6208, C6202
INTEGRATION
PWM
CAPS COMP
R6205, R6206, R6207
C6203, C6204
G
E
R6210
R6211
R6213, R6214, R6215
C6206, C6207
R6216, C6205
R6209
CYLI COMP
FG/PG SEPARATOR
PG SHIFTER(HEAD SWITCH POSITION)
F
+5V
R6201
D
(FROM VIDEO CIRCUIT) V-SYNC
(TO HEAD AMP CIRCUIT) HEAD SW PULSE
R6212
D6202
R6224
R6223
R6227
R6228
R6229

MODEL PV-4325S)


IC6001
IC2601
+14V
+B
CYLINDER MOTOR DRIVE
C2611
C2610
PG/FG PULSE GENERATOR
CAPSTAN MOTOR DRIVE
+14V
VCC
DIFFERENTIAL AMP
POSITION SIGNAL PROCESS
P2501
P6201
13
15
17
11
6
5
REC CTL AMP
PB-ON
C6223
C6222
AMP
C6219
C6220
NEGATIVE PB CTL CLAMP
PLAYBACK CTL CLAMP
SELECT
1/2 VCC
R6225
R6226
R/S/F
C6214
SCHMIT
COUNT DOWN
PG
SELECT
AMP
Q6201
C6201
D6201
CAP ON (H)
R6203
R6202
1/2 VCC
IC6201
R6204
R6208, C6202
INTEGRATION
INTEGRATION
PWM
PWM
CAPSTAN SPEED COMPARATOR
R6205, R6206, R6207
C6203, C6204
CYLINDER/CAPSTAN PHASE COMPARATOR
1/2 VCC
R6210
R6211
R6209
R6213, R6214, R6215
C6206, C6207
R6216, C6205
PWM
PWM
CYLINDER SPEED COMPARATOR
FG
FG/PG SEPARATOR
PG
H. SW SIGNAL GENERATOR
PG SHIFTER(HEAD SWITCH POSITION)
+5V
R6201
(FROM VIDEO CIRCUIT) V-SYNC
(TO HEAD AMP CIRCUIT) HEAD SW PULSE
+5V
R6212
D6202
POWER ON (L)
R6224
ACC
R6223
H ROLL
+5V
R6228
R6227
C LIM 1
R6229
SLOW/STILL CONTROL
REC CTL /TR MM GENERATOR
ENVELOPE DETECTOR
TP6003
P3001
P3501
18
(FROM HEAD AMP CIRCUIT) ENVELOPE VOLTAGE
V-LOCK PULSE GENERATOR
(TO VIDEO CIRCUIT) V-LOCK PULSE
HEAD AMP CONTROL
ROTARY SIGNAL GENERATOR
(TO VIDEO CIRCUIT) ROTARY SW
HEAD AMP SELECT SIGNAL GENERATOR
21
(TO HEAD AMP CIRCUIT) HEAD AMP SW
22
(FROM HEAD AMP CIRCUIT) ENVELOPE DET
Ⓒ
Ⓗ
Ⓖ
Ⓔ
Ⓕ
Ⓓ
IF
UIT
502

SYSTEM CONTROL/TIMER BLOCK DIAGRAM (FOR MODEL PV-4351/PV-4351-K/PV-4358)


LOAD
UNLOAD
REV
(222°
-232°)
EJECT
(345° -74°)
FF/REW
(330° -345°)
PLAY/REC/CUE
/STOP/PAUSE
(294° -330°)
B C D A
P2504 P2501 P6201
4 7 7
6 22 22
7 21 21
3 8 8
a
b
c
d
X6201
(7.16MHz)
OSC
A
IC6001
+5V
(FROM P1201(3))
POWER DOWN(L)
Q6004,Q6005
Q6006,Q6007
RESET
R6063
R6066
R6069
R6072
31 OSC 2
32 OSC 1
74 VDD
20 RESET
65 POWER DOWN (L)
81 MODE SW POSITION D
/KEY DATA 0
80 MODE SW POSITION C
/KEY DATA 1
79 MODE SW POSITION B
/KEY DATA 2
78 MODE SW POSITION A
/KEY DATA 3
3 SCAN 2
2 SCAN 1
75 KEY DATA 6
76 MTS SIGNAL (L)
/KEY DATA 5
77 SAP SIGNAL (L)
/KEY DATA 4
15 IR DATA
70 CASSETTE UP (H)/DOWN (L)
67 T-PHOTO TR (L)
66 S-PHOTO TR (L)
68 T-REEL PULSE/SERVICE (L)
71 SAFETY TAB BROKEN (H)
35 VIDEO DELAY REC (H)
29 SENSOR LED ON (H)
P9002 PACK PIN
7 7
P9002 PACK PIN
8 8
P7501 P6001
13 13
U7501
IR
RECEIVER
SW6002
CASSETTEUP/DOWN SW
R6085
R6087
R6086
Q6001
(TAKEUP
PHOTO TR)
Q6002
(SUPPLY
PHOTO TR)
R6032
R6088
TP6001
※1
B
SW+12V
IC6004
(REEL SENSOR)
SW6001
SAFETY TAB SW
Q6008
TO HEAD AMP
/AUDIO CIRCUIT
Q6009
D6001
(SENSOR LED)
TP6016
※4
+14V
Q6003
TP6002 ※2
H-ROLL ACCELERATION
/SELF DIAGNOSTIC 38
SERIAL DATA 0 18
SERIAL CLOCK 0 17
SERIAL DATA 1 19
OSD-CS (L) 28
Hi-Fi (H)/NORMAL (L) 1
AUDIO MUTE (H) 6
VIDEO EE (H)
/AUDIO EE (H) 12
INPUT SELECT 1 36
INPUT SELECT 2 30
Hi-Fi AUDIO HEAD SW 37
PB Hi-Fi AUDIO (H) 54
※6
P6001 P7501
7 7
8 8
6 6
5 5
PACK PIN P4202
10 10
9 9
14 14
11 11
PACK PIN P4203
20 20
PACK PIN P4202
8 8
13 13
TV (H)/VCR (L) 4
DTS INT/BUSY (L) 5
LP/SLP (H) 8
SLP (H) 9
CUE/REV/X2
/SLOW/STILL (L) 13
AI PICTURE
CTL SIGNAL 42
SIGNAL (L) 72
SIGNAL LINE (H)
/KEY DATA 7 73
TO/FROM VIDEO
/AUDIO/HEAD AMP
UHF/VHF TUNER
/TV DEMODU CIRCUIT
※5
LOADING MOTOR
REVERSE (H) 10
LOADING MOTOR
FORWARD (H) 11
※3
J6001
M
LOADING
MOTOR
J6002
IC6003
9
7
6
SW1
SW2
SW3
SW4
5
3
1
CONTROL
LOGIC

MODE SELECT SWITCH

MODE \ PIN NO OF IC6001	A ⑱	B ⑲	C ⑳	D ㉑
	A (78)	B (79)	C (80)	D (81)
FF/REW	L	H	H	L
PLAY/REC/CUE/STOP/PAUSE	H	H	H	L
STANDBY	H	H	L	H
REVIEW	H	L	H	H
EJECT	L	H	H	H

※2
THIS IS USED FOR SIMPLIFIED FAULT FINDING POINT.

※6:INPUT SELECT

MODE \ SIGNAL	TUNER	SIMUL CAST	LINE 1
INPUT SELECT 1	L	L	H
INPUT SELECT 2	L	H	H

※5:TAPE SPEED INFORMATION

	PIN9	PIN8
SP	L	L
LP	L	H
SLP	H	H

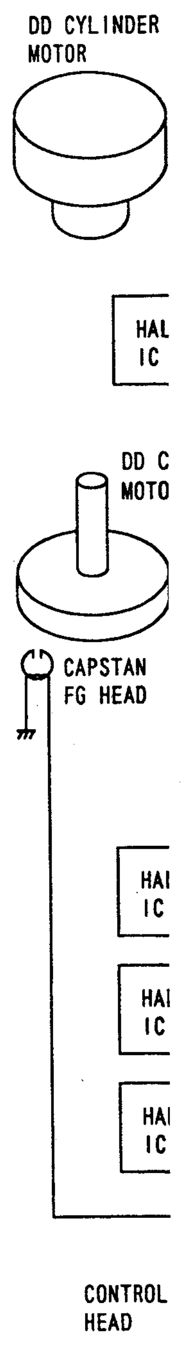
※3
SUPPLYING THE DC VOLTAGE AFTER CUTTING THE JUMPER WIRE CAUSES AN UNLOADING OPERATION SEQUENCE FOR THE REMOVAL OF A JAMMED TAPE.

MODE	PIN10 OF IC6001	PIN11 OF IC6001	SW1	SW2	SW3	SW4
LOADING	L	H	ON	OFF	OFF	ON
UNLOADING	H	L	OFF	ON	ON	OFF
BRAKE	H	H	OFF	ON	OFF	ON

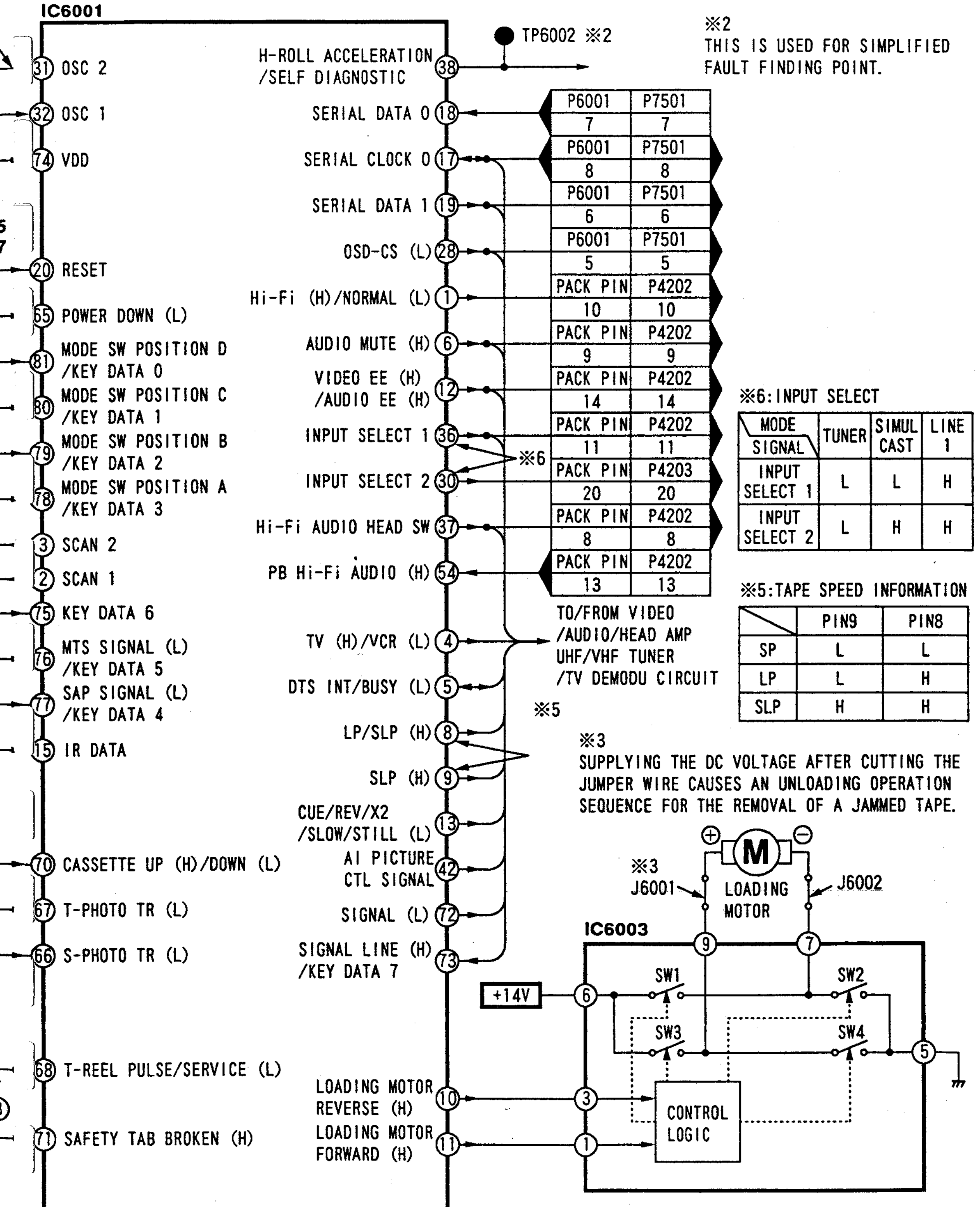
※1
BY SHORTING TP6001 AND GND,
ANY OPERATION CAN BE DONE
WITHOUT A CASSETTE (FOR SERVICE).

※4
THIS IS USED FOR MICROPROCESSOR
JUDGMENT POINT.

SERV
(FOR


DD CYLINDER
MOTOR
HAL
IC
DD C
MOTO
CAPSTAN
FG HEAD
HAI
IC
HAI
IC
HAI
IC
CONTROL
HEAD

V-4351/PV-4351-K/PV-4358)


IC6001
31 OSC 2
32 OSC 1
74 VDD
20 RESET
55 POWER DOWN (L)
81 MODE SW POSITION D /KEY DATA 0
80 MODE SW POSITION C /KEY DATA 1
79 MODE SW POSITION B /KEY DATA 2
78 MODE SW POSITION A /KEY DATA 3
3 SCAN 2
2 SCAN 1
75 KEY DATA 6
76 MTS SIGNAL (L) /KEY DATA 5
77 SAP SIGNAL (L) /KEY DATA 4
15 IR DATA
70 CASSETTE UP (H)/DOWN (L)
67 T-PHOTO TR (L)
66 S-PHOTO TR (L)
68 T-REEL PULSE/SERVICE (L)
71 SAFETY TAB BROKEN (H)
35 VIDEO DELAY REC (H)
29 SENSOR LED ON (H)
H-ROLL ACCELERATION /SELF DIAGNOSTIC 38
SERIAL DATA 0 18
SERIAL CLOCK 0 17
SERIAL DATA 1 19
OSD-CS (L) 28
Hi-Fi (H)/NORMAL (L) 1
AUDIO MUTE (H) 6
VIDEO EE (H) /AUDIO EE (H) 12
INPUT SELECT 1 36
INPUT SELECT 2 30
Hi-Fi AUDIO HEAD SW 37
PB Hi-Fi AUDIO (H) 54
TV (H)/VCR (L) 4
DTS INT/BUSY (L) 5
LP/SLP (H) 8
SLP (H) 9
CUE/REV/X2 /SLOW/STILL (L) 13
AI PICTURE CTL SIGNAL 42
SIGNAL (L) 72
SIGNAL LINE (H) /KEY DATA 7 73
LOADING MOTOR REVERSE (H) 10
LOADING MOTOR FORWARD (H) 11
TP6002 ※2
P6001 P7501 7 7
P6001 P7501 8 8
P6001 P7501 6 6
P6001 P7501 5 5
PACK PIN P4202 10 10
PACK PIN P4202 9 9
PACK PIN P4202 14 14
PACK PIN P4202 11 11
PACK PIN P4203 20 20
PACK PIN P4202 8 8
PACK PIN P4202 13 13
※6
TO/FROM VIDEO /AUDIO/HEAD AMP UHF/VHF TUNER /TV DEMODU CIRCUIT
※5
※3 J6001
LOADING MOTOR
M
J6002
IC6003
+14V
SW1
SW2
SW3
SW4
CONTROL LOGIC
9 7 6 5 3 1

※2
THIS IS USED FOR SIMPLIFIED
FAULT FINDING POINT.

※6:INPUT SELECT

MODE \ SIGNAL	TUNER	SIMUL CAST	LINE 1
INPUT SELECT 1	L	L	H
INPUT SELECT 2	L	H	H

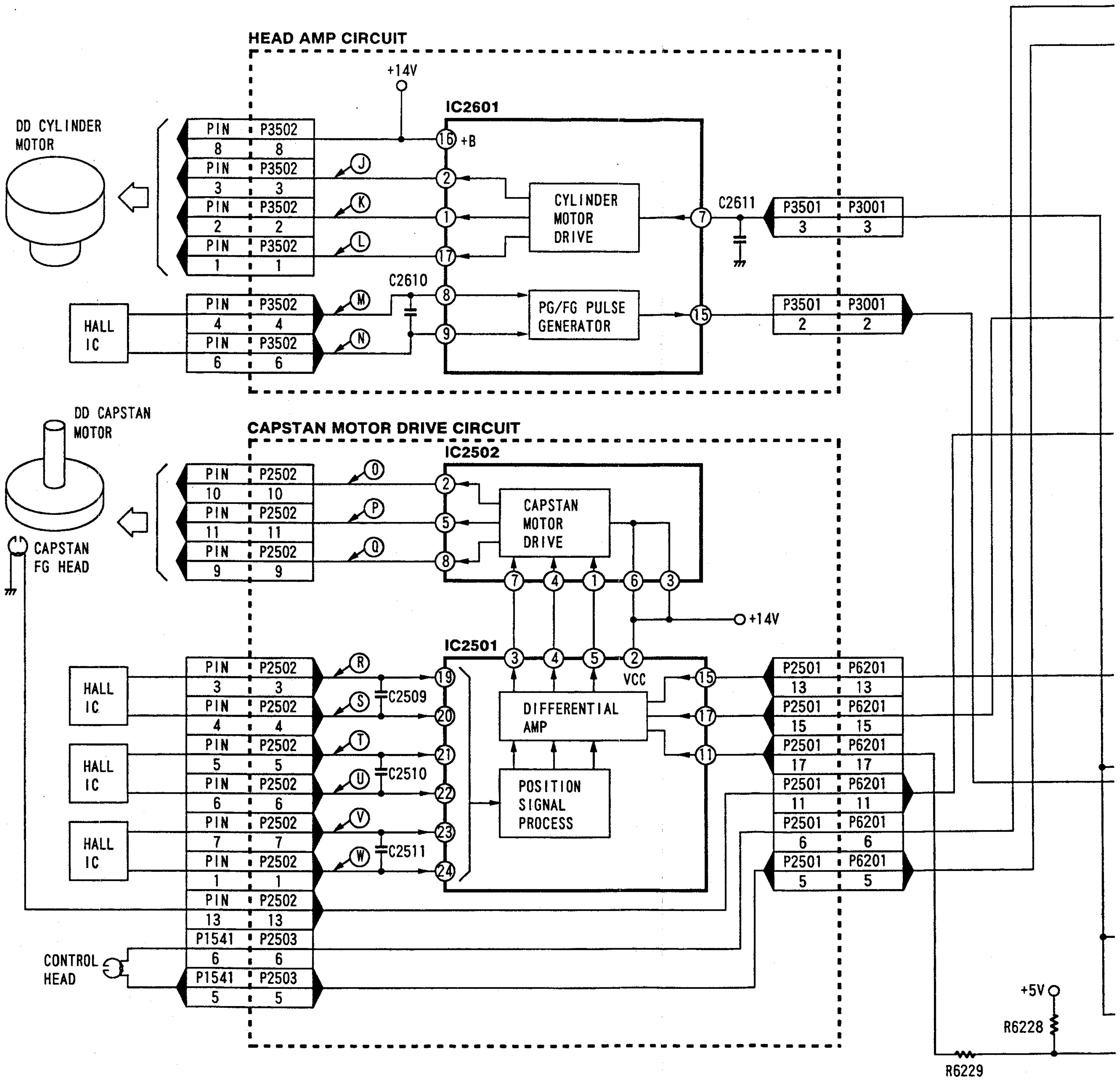
※5:TAPE SPEED INFORMATION

	PIN9	PIN8
SP	L	L
LP	L	H
SLP	H	H

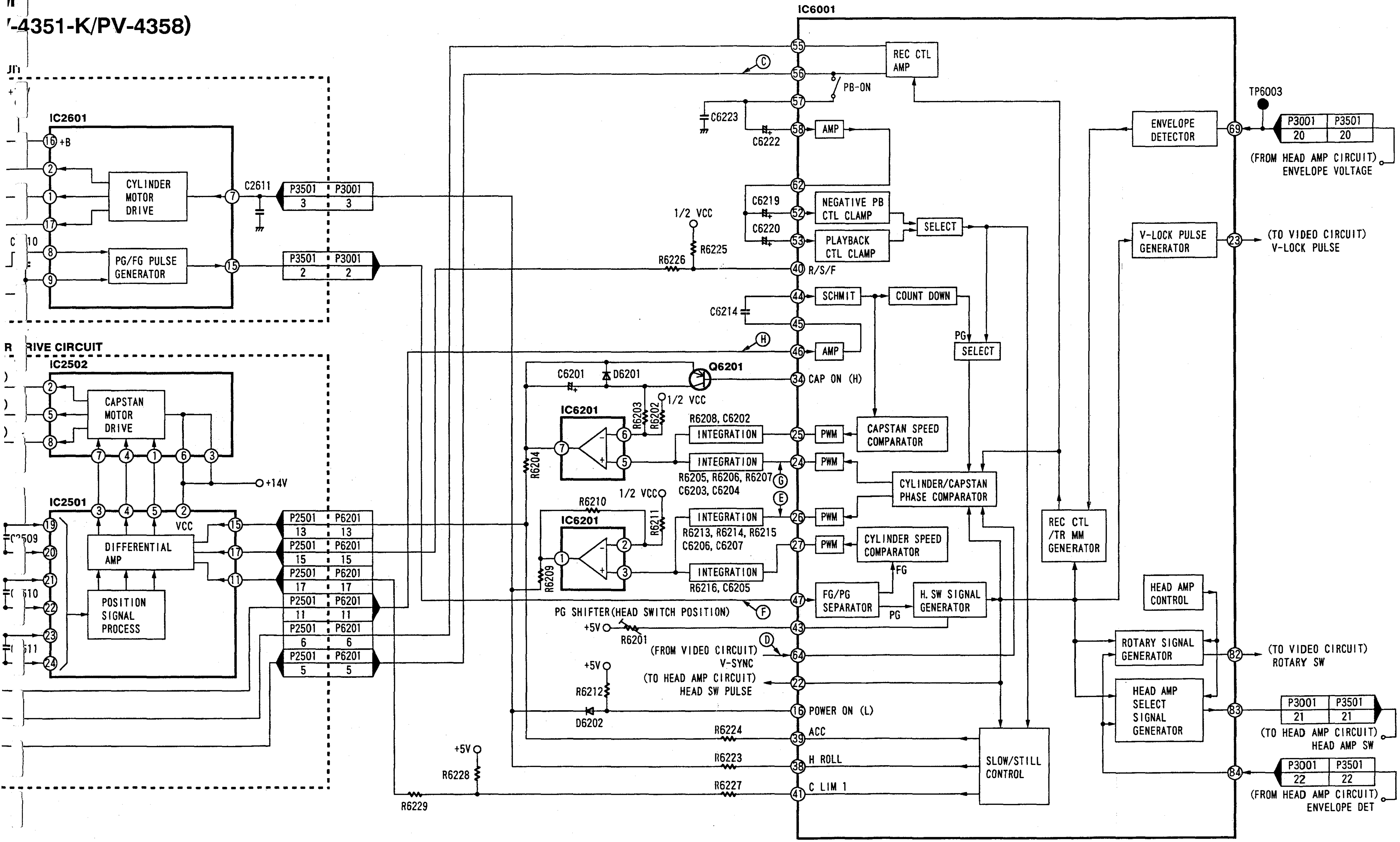
※3
SUPPLYING THE DC VOLTAGE AFTER CUTTING THE
JUMPER WIRE CAUSES AN UNLOADING OPERATION
SEQUENCE FOR THE REMOVAL OF A JAMMED TAPE.

MODE	PIN10 OF IC6001	PIN11 OF IC6001	SW1	SW2	SW3	SW4
LOADING	L	H	ON	OFF	OFF	ON
UNLOADING	H	L	OFF	ON	ON	OFF
BRAKE	H	H	OFF	ON	OFF	ON

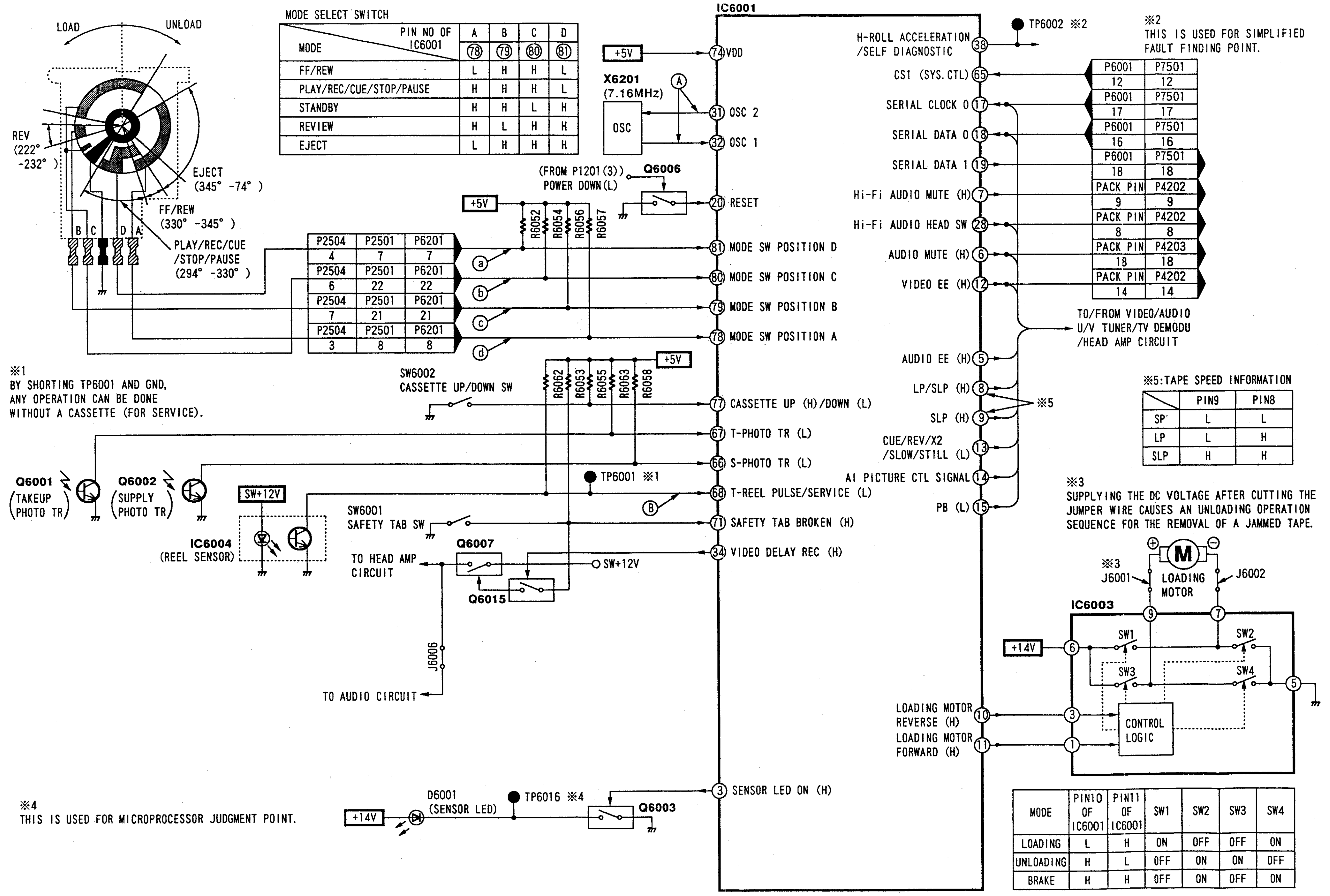
SERVO BLOCK DIAGRAM
(FOR MODEL PV-4351/PV-4351-K/PV-4358)


HEAD AMP CIRCUIT
+14V
IC2601
DD CYLINDER MOTOR
PIN P3502 8 8
PIN P3502 3 3
PIN P3502 2 2
PIN P3502 1 1
J K L M N
16 +B
CYLINDER MOTOR DRIVE
C2611
P3501 P3001 3 3
HALL IC
PIN P3502 4 4
PIN P3502 6 6
C2610
PG/FG PULSE GENERATOR
P3501 P3001 2 2
DD CAPSTAN MOTOR
CAPSTAN FG HEAD
CAPSTAN MOTOR DRIVE CIRCUIT
IC2502
PIN P2502 10 10
PIN P2502 11 11
PIN P2502 9 9
O P Q
CAPSTAN MOTOR DRIVE
+14V
IC2501
VCC
HALL IC
HALL IC
HALL IC
PIN P2502 3 3
PIN P2502 4 4
PIN P2502 5 5
PIN P2502 6 6
PIN P2502 7 7
PIN P2502 1 1
PIN P2502 13 13
P1541 P2503 6 6
P1541 P2503 5 5
R S T U V W
C2509
C2510
C2511
DIFFERENTIAL AMP
POSITION SIGNAL PROCESS
P2501 P6201 13 13
P2501 P6201 15 15
P2501 P6201 17 17
P2501 P6201 11 11
P2501 P6201 6 6
P2501 P6201 5 5
CONTROL HEAD
+5V
R6228
R6229

'-4351-K/PV-4358)


IC6001
REC CTL AMP
PB-ON
C6223
C6222
AMP
C6219
C6220
NEGATIVE PB CTL CLAMP
PLAYBACK CTL CLAMP
SELECT
1/2 VCC
R6225
R6226
R/S/F
SCHMIT
COUNT DOWN
C6214
PG
SELECT
Q6201
C6201
D6201
CAP ON (H)
1/2 VCC
IC6201
R6203
R6202
R6204
R6208, C6202
INTEGRATION
PWM
CAPSTAN SPEED COMPARATOR
R6205, R6206, R6207
C6203, C6204
CYLINDER/CAPSTAN PHASE COMPARATOR
R6210
1/2 VCC
R6211
R6209
R6213, R6214, R6215
C6206, C6207
CYLINDER SPEED COMPARATOR
FG
R6216, C6205
FG/PG SEPARATOR
H. SW SIGNAL GENERATOR
PG
PG SHIFTER(HEAD SWITCH POSITION)
+5V
R6201
(FROM VIDEO CIRCUIT) V-SYNC
(TO HEAD AMP CIRCUIT) HEAD SW PULSE
R6212
D6202
POWER ON (L)
R6224
ACC
R6223
H ROLL
R6227
C LIM 1
SLOW/STILL CONTROL
R6228
R6229
REC CTL /TR MM GENERATOR
ENVELOPE DETECTOR
TP6003
P3001 P3501 20 20
(FROM HEAD AMP CIRCUIT) ENVELOPE VOLTAGE
V-LOCK PULSE GENERATOR
(TO VIDEO CIRCUIT) V-LOCK PULSE
HEAD AMP CONTROL
ROTARY SIGNAL GENERATOR
(TO VIDEO CIRCUIT) ROTARY SW
HEAD AMP SELECT SIGNAL GENERATOR
P3001 P3501 21 21
(TO HEAD AMP CIRCUIT) HEAD AMP SW
P3001 P3501 22 22
(FROM HEAD AMP CIRCUIT) ENVELOPE DET
IC2601
+B
CYLINDER MOTOR DRIVE
C2611
P3501 P3001 3 3
PG/FG PULSE GENERATOR
P3501 P3001 2 2
C 10
R RIVE CIRCUIT
IC2502
CAPSTAN MOTOR DRIVE
+14V
IC2501
VCC
DIFFERENTIAL AMP
POSITION SIGNAL PROCESS
C2509
C 510
C 511
P2501 P6201 13 13
P2501 P6201 15 15
P2501 P6201 17 17
P2501 P6201 11 11
P2501 P6201 6 6
P2501 P6201 5 5
Ⓒ Ⓗ Ⓖ Ⓔ Ⓕ Ⓓ

SYSTEM CONTROL BLOCK DIAGRAM (FOR MODEL PV-4355S)


LOAD
UNLOAD
REV (222° -232°)
EJECT (345° -74°)
FF/REW (330° -345°)
PLAY/REC/CUE /STOP/PAUSE (294° -330°)
B C D A
IC6001
+5V
74 VDD
X6201 (7.16MHz)
OSC
A
31 OSC 2
32 OSC 1
(FROM P1201(3)) POWER DOWN(L)
Q6006
20 RESET
+5V
R6052
R6054
R6056
R6057
P2504 P2501 P6201
4 7 7
6 22 22
7 21 21
3 8 8
a
b
c
d
81 MODE SW POSITION D
80 MODE SW POSITION C
79 MODE SW POSITION B
78 MODE SW POSITION A
SW6002 CASSETTE UP/DOWN SW
R6062
R6053
R6055
R6063
R6058
77 CASSETTE UP (H)/DOWN (L)
67 T-PHOTO TR (L)
66 S-PHOTO TR (L)
TP6001 ※1
68 T-REEL PULSE/SERVICE (L)
B
71 SAFETY TAB BROKEN (H)
34 VIDEO DELAY REC (H)
Q6001 (TAKEUP PHOTO TR)
Q6002 (SUPPLY PHOTO TR)
SW+12V
IC6004 (REEL SENSOR)
SW6001 SAFETY TAB SW
Q6007
TO HEAD AMP CIRCUIT
SW+12V
Q6015
J6006
TO AUDIO CIRCUIT
D6001 (SENSOR LED)
TP6016 ※4
+14V
Q6003
3 SENSOR LED ON (H)
TP6002 ※2
H-ROLL ACCELERATION /SELF DIAGNOSTIC 38
CS1 (SYS.CTL) 65
SERIAL CLOCK 0 17
SERIAL DATA 0 18
SERIAL DATA 1 19
Hi-Fi AUDIO MUTE (H) 7
Hi-Fi AUDIO HEAD SW 28
AUDIO MUTE (H) 6
VIDEO EE (H) 12
P6001 P7501
12 12
P6001 P7501
17 17
P6001 P7501
16 16
P6001 P7501
18 18
PACK PIN P4202
9 9
PACK PIN P4202
8 8
PACK PIN P4203
18 18
PACK PIN P4202
14 14
TO/FROM VIDEO/AUDIO U/V TUNER/TV DEMODU /HEAD AMP CIRCUIT
AUDIO EE (H) 5
LP/SLP (H) 8
SLP (H) 9
※5
CUE/REV/X2 /SLOW/STILL (L) 13
AI PICTURE CTL SIGNAL 14
PB (L) 15
LOADING MOTOR REVERSE (H) 10
LOADING MOTOR FORWARD (H) 11
※3
J6001
M
LOADING MOTOR
J6002
IC6003
+14V
SW1
SW2
SW3
SW4
CONTROL LOGIC
9 7 6 5 3 1

MODE SELECT SWITCH

MODE \ PIN NO OF IC6001	A ⑱ (78)	B (79)	C (80)	D (81)
FF/REW	L	H	H	L
PLAY/REC/CUE/STOP/PAUSE	H	H	H	L
STANDBY	H	H	L	H
REVIEW	H	L	H	H
EJECT	L	H	H	H

※5:TAPE SPEED INFORMATION

	PIN9	PIN8
SP	L	L
LP	L	H
SLP	H	H

MODE	PIN10 OF IC6001	PIN11 OF IC6001	SW1	SW2	SW3	SW4
LOADING	L	H	ON	OFF	OFF	ON
UNLOADING	H	L	OFF	ON	ON	OFF
BRAKE	H	H	OFF	ON	OFF	ON

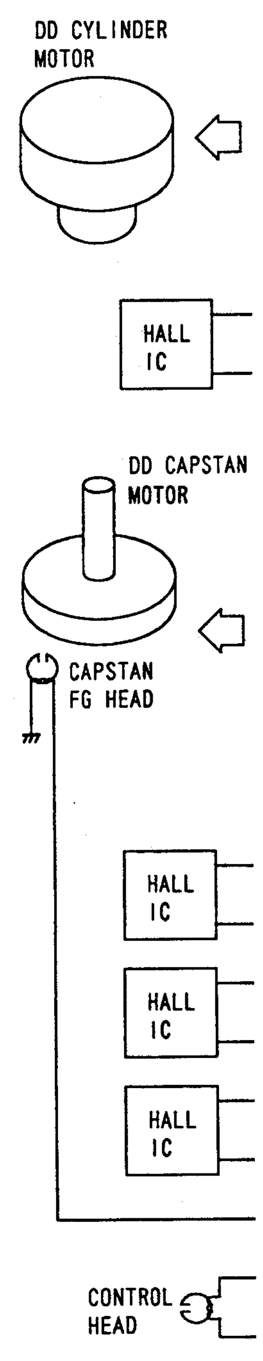
※1
BY SHORTING TP6001 AND GND, ANY OPERATION CAN BE DONE WITHOUT A CASSETTE (FOR SERVICE).

※2
THIS IS USED FOR SIMPLIFIED FAULT FINDING POINT.

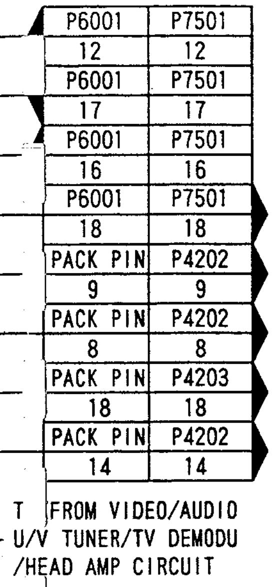
※3
SUPPLYING THE DC VOLTAGE AFTER CUTTING THE JUMPER WIRE CAUSES AN UNLOADING OPERATION SEQUENCE FOR THE REMOVAL OF A JAMMED TAPE.

※4
THIS IS USED FOR MICROPROCESSOR JUDGMENT POINT.

SERVO BI


DD CYLINDER MOTOR
HALL IC
DD CAPSTAN MOTOR
CAPSTAN FG HEAD
HALL IC
HALL IC
HALL IC
CONTROL HEAD

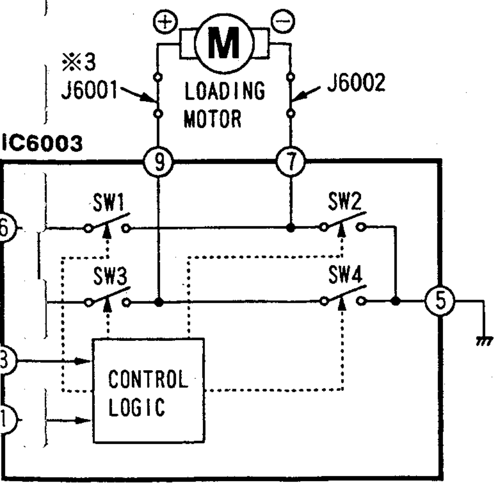
※2
THIS IS USED FOR SIMPLIFIED
FAULT FINDING POINT.


P6001 P7501
12 12
P6001 P7501
17 17
P6001 P7501
16 16
P6001 P7501
18 18
PACK PIN P4202
9 9
PACK PIN P4202
8 8
PACK PIN P4203
18 18
PACK PIN P4202
14 14
T FROM VIDEO/AUDIO
U/V TUNER/TV DEMODU
/HEAD AMP CIRCUIT

※5:TAPE SPEED INFORMATION

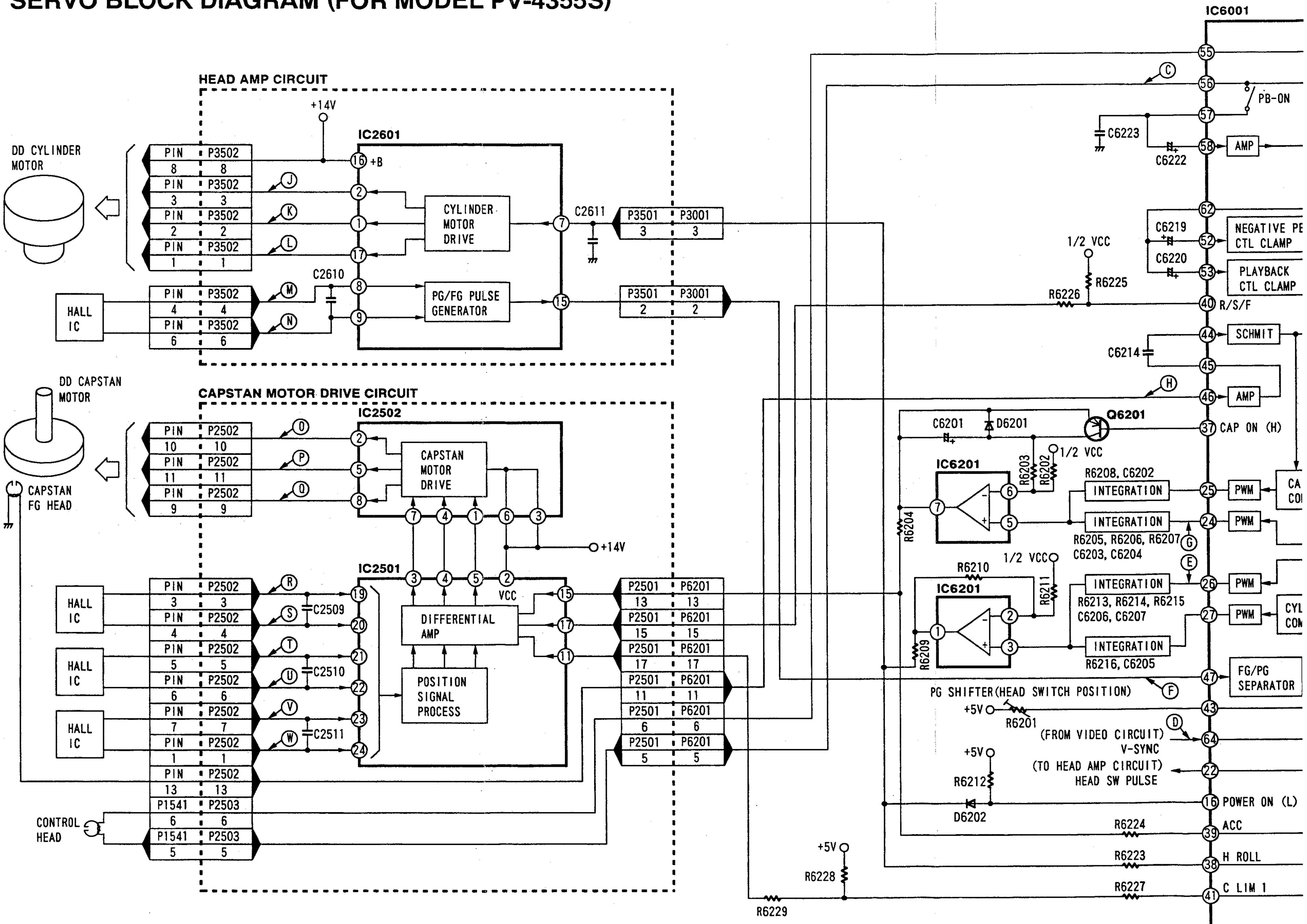
	PIN9	PIN8
SP	L	L
LP	L	H
SLP	H	H

※3
SUPPLYING THE DC VOLTAGE AFTER CUTTING THE JUMPER WIRE CAUSES AN UNLOADING OPERATION SEQUENCE FOR THE REMOVAL OF A JAMMED TAPE.

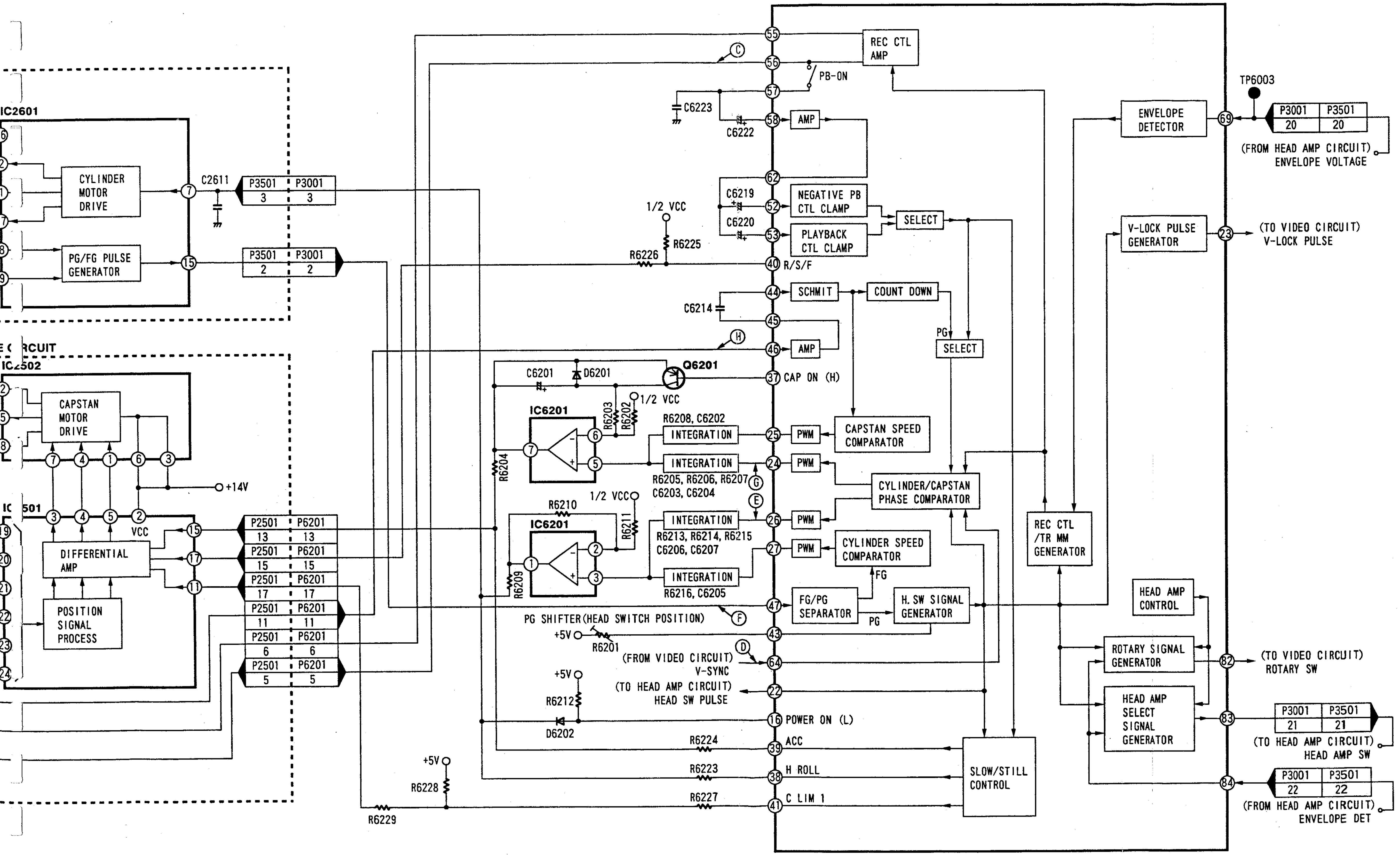

M
⊕
⊖
※3
J6001
LOADING MOTOR
J6002
IC6003
9
7
SW1
SW2
SW3
SW4
5
CONTROL LOGIC

PI O IC6001	PIN11 OF IC6001	SW1	SW2	SW3	SW4
	H	ON	OFF	OFF	ON
	L	OFF	ON	ON	OFF
H	H	OFF	ON	OFF	ON

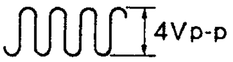
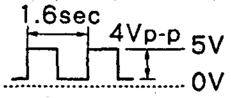
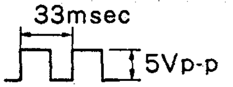
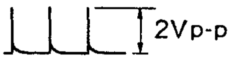
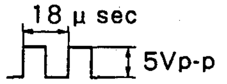
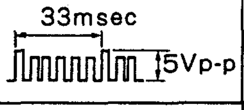
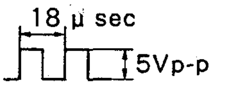
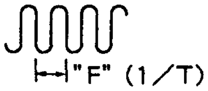
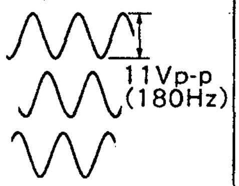
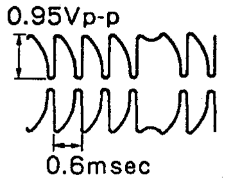
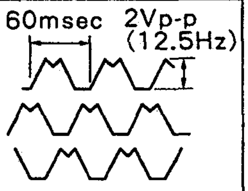
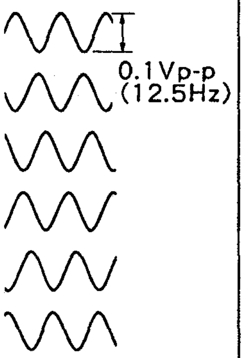
SERVO BLOCK DIAGRAM (FOR MODEL PV-4355S)


HEAD AMP CIRCUIT
DD CYLINDER MOTOR
+14V
IC2601
PIN P3502 8 8
PIN P3502 3 3
PIN P3502 2 2
PIN P3502 1 1
16 +B
2
1
17
CYLINDER MOTOR DRIVE
7
C2611
P3501 P3001 3 3
HALL IC
PIN P3502 4 4
PIN P3502 6 6
C2610
8
9
PG/FG PULSE GENERATOR
15
P3501 P3001 2 2
J
K
L
M
N
CAPSTAN MOTOR DRIVE CIRCUIT
DD CAPSTAN MOTOR
CAPSTAN FG HEAD
IC2502
PIN P2502 10 10
PIN P2502 11 11
PIN P2502 9 9
O
P
Q
CAPSTAN MOTOR DRIVE
7 4 1 6 3
+14V
IC2501
3 4 5 2
VCC
HALL IC
HALL IC
HALL IC
PIN P2502 3 3
PIN P2502 4 4
PIN P2502 5 5
PIN P2502 6 6
PIN P2502 7 7
PIN P2502 1 1
PIN P2502 13 13
P1541 P2503 6 6
P1541 P2503 5 5
R
S
T
U
V
W
C2509
C2510
C2511
19 20 21 22 23 24
DIFFERENTIAL AMP
POSITION SIGNAL PROCESS
15
17
11
P2501 P6201 13 13
P2501 P6201 15 15
P2501 P6201 17 17
P2501 P6201 11 11
P2501 P6201 6 6
P2501 P6201 5 5
CONTROL HEAD
IC6001
55
56
57
58
C
PB-ON
C6223
C6222
AMP
62
52
53
C6219
C6220
NEGATIVE PE CTL CLAMP
PLAYBACK CTL CLAMP
1/2 VCC
R6225
R6226
40 R/S/F
44
45
SCHMIT
C6214
H
46
AMP
C6201
D6201
Q6201
37 CAP ON (H)
IC6201
R6203
R6202
1/2 VCC
R6208, C6202
INTEGRATION
25 PWM
CA CO
R6204
7
6
5
INTEGRATION
24 PWM
R6205, R6206, R6207
C6203, C6204
G
E
1/2 VCC
R6210
R6211
IC6201
INTEGRATION
26 PWM
R6213, R6214, R6215
C6206, C6207
27 PWM
CYL CON
R6209
1
2
3
INTEGRATION
R6216, C6205
47
FG/PG SEPARATOR
PG SHIFTER (HEAD SWITCH POSITION)
F
43
+5V
R6201
D
(FROM VIDEO CIRCUIT) V-SYNC
64
(TO HEAD AMP CIRCUIT) HEAD SW PULSE
22
+5V
R6212
D6202
16 POWER ON (L)
R6224
39 ACC
R6223
38 H ROLL
+5V
R6228
R6227
41 C LIM 1
R6229

MODEL PV-4355S)


IC6001
IC2601
CYLINDER MOTOR DRIVE
PG/FG PULSE GENERATOR
C2611
P3501
P3001
3
2
IC2502
CAPSTAN MOTOR DRIVE
+14V
DIFFERENTIAL AMP
VCC
POSITION SIGNAL PROCESS
P2501
P6201
13
15
17
11
6
5
REC CTL AMP
PB-ON
C6223
C6222
AMP
C6219
C6220
NEGATIVE PB CTL CLAMP
PLAYBACK CTL CLAMP
SELECT
1/2 VCC
R6225
R6226
R/S/F
SCHMIT
COUNT DOWN
C6214
PG
AMP
Q6201
C6201
D6201
CAP ON (H)
IC6201
R6203
R6202
R6204
R6208, C6202
INTEGRATION
PWM
CAPSTAN SPEED COMPARATOR
R6205, R6206, R6207
C6203, C6204
CYLINDER/CAPSTAN PHASE COMPARATOR
R6210
R6211
R6209
R6213, R6214, R6215
C6206, C6207
R6216, C6205
CYLINDER SPEED COMPARATOR
FG
FG/PG SEPARATOR
H. SW SIGNAL GENERATOR
PG SHIFTER(HEAD SWITCH POSITION)
+5V
R6201
(FROM VIDEO CIRCUIT) V-SYNC
(TO HEAD AMP CIRCUIT) HEAD SW PULSE
R6212
D6202
POWER ON (L)
R6224
ACC
R6223
H ROLL
R6228
R6227
C LIM 1
R6229
SLOW/STILL CONTROL
REC CTL /TR MM GENERATOR
ENVELOPE DETECTOR
V-LOCK PULSE GENERATOR
TP6003
20
(FROM HEAD AMP CIRCUIT) ENVELOPE VOLTAGE
(TO VIDEO CIRCUIT) V-LOCK PULSE
HEAD AMP CONTROL
ROTARY SIGNAL GENERATOR
HEAD AMP SELECT SIGNAL GENERATOR
(TO VIDEO CIRCUIT) ROTARY SW
21
(TO HEAD AMP CIRCUIT) HEAD AMP SW
22
(FROM HEAD AMP CIRCUIT) ENVELOPE DET
Ⓒ
Ⓗ
Ⓖ
Ⓔ
Ⓕ
Ⓓ

WAVEFORMS OF SYSTEM CONTROL AND SERVO STAGE

NO	WAVEFORM	NOTE	NO	WAVEFORM	NOTE	NO	WAVEFORM	NOTE
Ⓐ		(7.159 MHz)	Ⓑ	 1.6sec 4Vp-p 5V 0V	REC／P.B	Ⓒ	 33msec 5Vp-p	REC CTL
Ⓓ			Ⓔ	 18 µ sec 5Vp-p		Ⓕ	 33msec 5Vp-p	
Ⓖ	 18 µ sec 5Vp-p		Ⓗ		"F" = SP : 1080 LP : 540 SLP : 360			
Ⓙ Ⓚ Ⓛ	 11Vp-p (180Hz)		Ⓜ Ⓝ	 0.95Vp-p 0.6msec		Ⓞ Ⓟ Ⓠ	 60msec 2Vp-p (12.5Hz)	
Ⓡ Ⓢ Ⓣ Ⓤ Ⓥ Ⓦ	 0.1Vp-p (12.5Hz)							

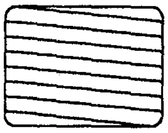
SYSTEM CONTROL AND SERVO CHECKING PROCEDURE

SYMPTOM	FLOW OF TROUBLESHOOT →						
Dead or Malfunctions	CHECK POINT	Pin74 (VDD5V)	Ⓐ	Pin20 NORMALⒽ	Pin17 (SCK)	ⓐ ~ ⓓ	* NOTE2
	IF NO.	↓	↓	↓	↓	↓	
	CHANGE	Power	X6201	* NOTE3	IC6001	* NOTE1	

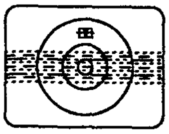
* NOTE1 : Adjust Gear Phase.
* NOTE2 : Check Power Circuit.
* NOTE3 : Change Q6004, Q6005, Q6006 and Q6007 (For model PV-4308/PV-4311 /PV-4311-K/PV-4315S/PV-4351/PV-4351-K/PV-4358) or Q6006 (For model PV-4325S/PV-4355S).

SYMPTOM	FLOW OF TROUBLESHOOT →						
NO PLAY	CHECK POINT	ⓐ ~ ⓓ	Ⓕ	Ⓑ			
	IF NO.	↓	↓	↓			
	CHANGE	* NOTE1	* NOTE2	* NOTE3			

* NOTE1 : Adjust Gear Phase.
* NOTE2 : IC2601 (Cyl Drive) or Cylinder U.
* NOTE3 : IC2501 or IC2502 (Cap Drive) or Reel Sensor.

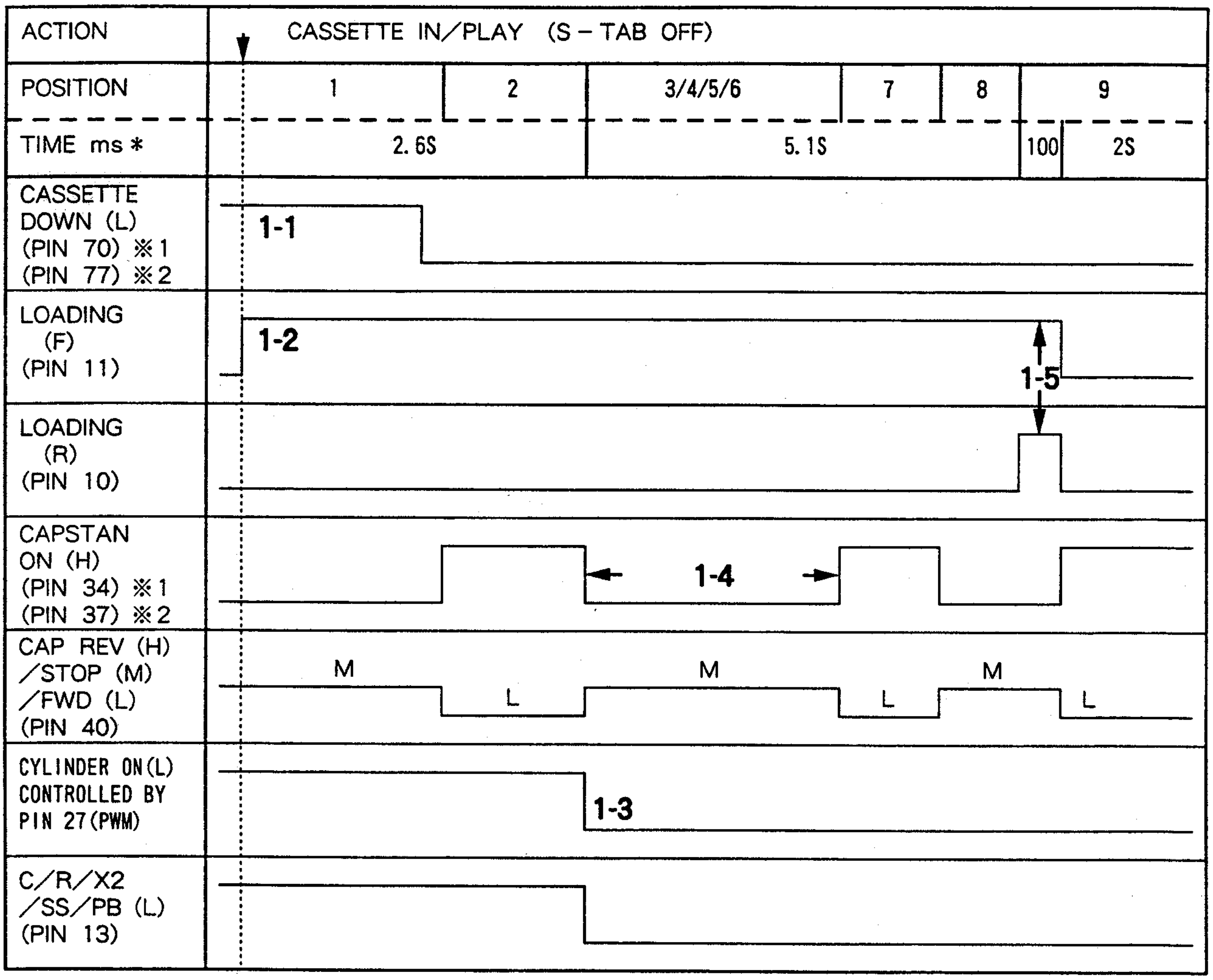
SYMPTOM	FLOW OF TROUBLESHOOT →						
Distorted Playback Pix (1) 	CHECK POINT	Ⓓ	Ⓕ	* NOTE3	* NOTE5		
	IF NO.	↓	↓	↓			
	CHANGE	* NOTE1	* NOTE2	* NOTE4			

* NOTE1 : Check Video Circuit.
* NOTE2 : IC2601 (Cyl Drive) or Cylinder U.
* NOTE3 : Open pin 7 of IC2601 and apply external 2.5V DC to pin 7.
* NOTE4 : If the picture is still the same, change IC2601 or Cylinder U.
* NOTE5 : If the picture is improved, change IC6001 or IC6201.

SYMPTOM	FLOW OF TROUBLESHOOT →						
Distorted Playback Pix (2)  (Periodic Noise bar)	CHECK POINT	Ⓒ	Ⓗ	* NOTE3	* NOTE5		
	IF NO.	↓	↓	↓			
	CHANGE	* NOTE1	* NOTE2	* NOTE4			

* NOTE1 : Check tape travel and clean A/C head.
* NOTE2 : Check FG Head.
* NOTE3 : Open pin 15 of IC2501 and apply external 2.5V DC to pin 15.
* NOTE4 : If the picture is still the same, change IC2501,2502 or Capstan Motor.
* NOTE5 : If the picture is improved, change IC6001 or IC6201.

TIMING CHART 1


ACTION
CASSETTE IN/PLAY (S－TAB OFF)
POSITION
1
2
3/4/5/6
7
8
9
TIME ms＊
2.6S
5.1S
100
2S
CASSETTE DOWN (L) (PIN 70) ※1 (PIN 77) ※2
1-1
LOADING (F) (PIN 11)
1-2
1-5
LOADING (R) (PIN 10)
CAPSTAN ON (H) (PIN 34) ※1 (PIN 37) ※2
1-4
CAP REV (H) /STOP (M) /FWD (L) (PIN 40)
M
L
M
L
M
L
CYLINDER ON(L) CONTROLLED BY PIN 27(PWM)
1-3
C/R/X2 /SS/PB (L) (PIN 13)

NOTE : 1) PIN NO. WITH BRACKET INDICATES PIN NO. OF IC6001.
2) ＊INDICATES MAXIMUM TIME.
3) ※1 : MODEL PV-4308/PV-4311/PV-4311-K/PV-4315S/PV-4351/PV-4351-K/PV-4358.
4) ※2 : MODEL PV-4325S/PV-4355S.

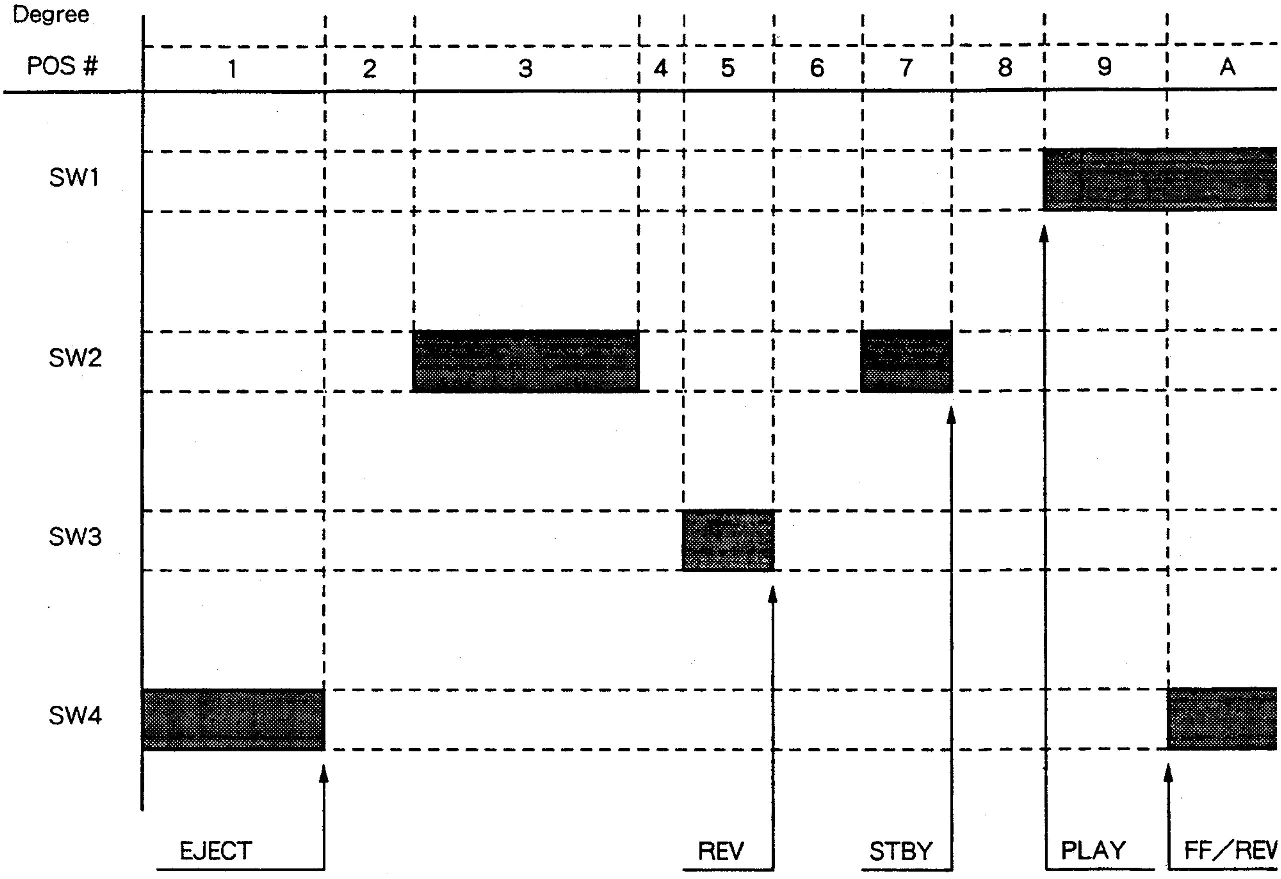
MODE BY MODE OPERATION

1. CASSETTE IN/PLAY (WITHOUT SAFETY TAB)

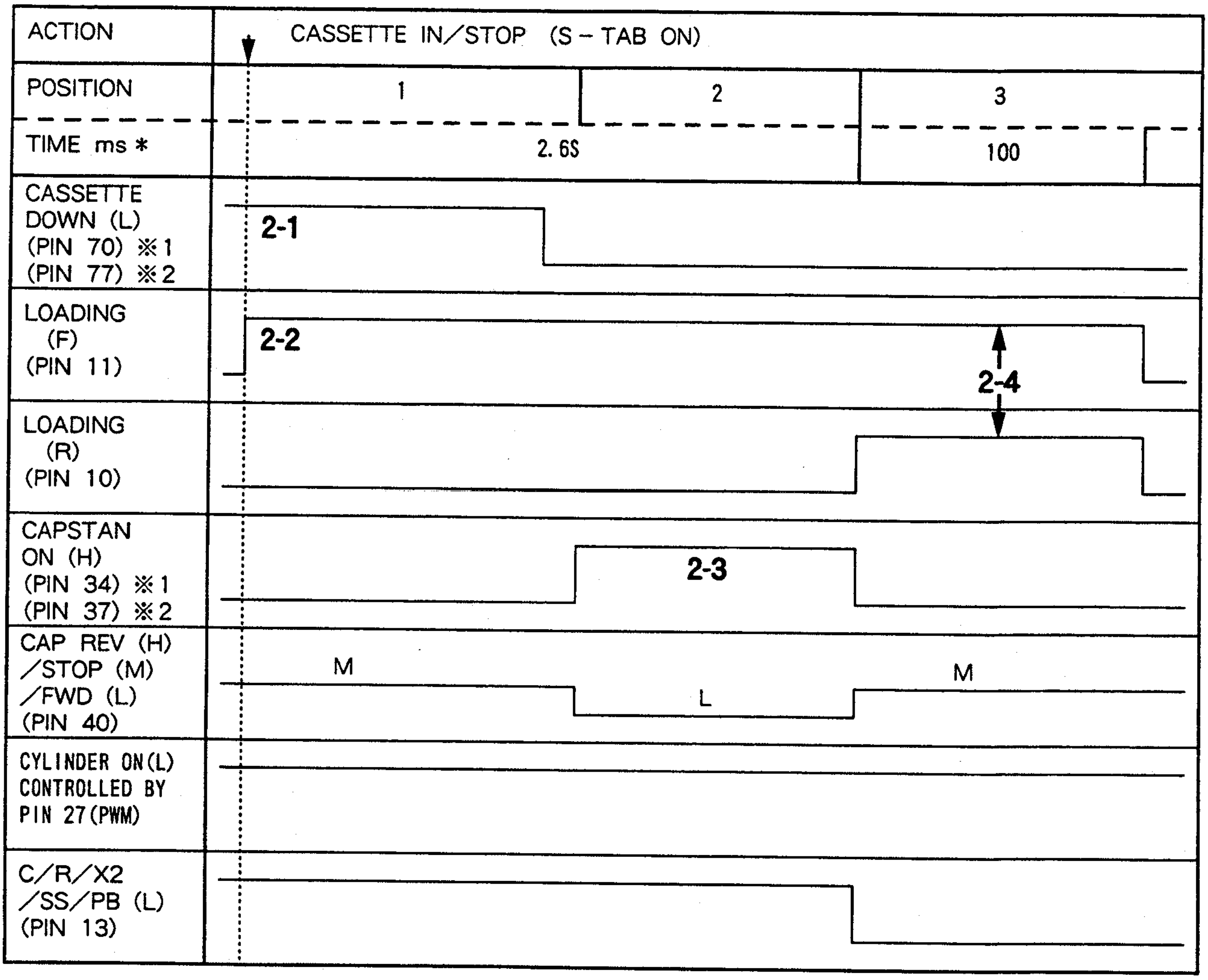
1－1. The Cassette Down (L) signal goes LOW at position 2.
(If the Cassette Down (L) signal does not go LOW even at position 2, the unit ejects the tape.)
1－2. The Loading Motor starts rotation in a forward direction.
1－3. The Cylinder starts rotation for quick play.
1－4. 1) The Play idler returns to center.
2) Aim the Play Idler to the takeup side.
1－5. When the Mode Switch reaches position 9, the Loading (R) signal goes HIGH to apply a brake to the Loading Motor. Then the Loading Motor stops.

TIMING CHART

BASIC OPERATION WITH MODE SELECT SWITCH


Degree
POS #
1
2
3
4
5
6
7
8
9
A
SW1
SW2
SW3
SW4
EJECT
REV
STBY
PLAY
FF/REV

TIMING CHART 2


ACTION
CASSETTE IN/STOP (S−TAB ON)
POSITION
1
2
3
TIME ms *
2.6S
100
CASSETTE DOWN (L) (PIN 70) ※1 (PIN 77) ※2
2-1
LOADING (F) (PIN 11)
2-2
2-4
LOADING (R) (PIN 10)
CAPSTAN ON (H) (PIN 34) ※1 (PIN 37) ※2
2-3
CAP REV (H) /STOP (M) /FWD (L) (PIN 40)
M
L
M
CYLINDER ON(L) CONTROLLED BY PIN 27(PWM)
C/R/X2 /SS/PB (L) (PIN 13)

NOTE : 1) PIN NO. WITH BRACKET INDICATES PIN NO. OF IC6001.
2) * INDICATES MAXIMUM TIME.
3) ※1 : MODEL PV-4308/PV-4311/PV-4311-K/PV-4315S/PV-4351/PV-4351-K/PV-4358.
4) ※2 : MODEL PV-4325S/PV-4355S.

MODE BY MODE OPERATION

2. CASSETTE IN/STOP (WITH SAFETY TAB)

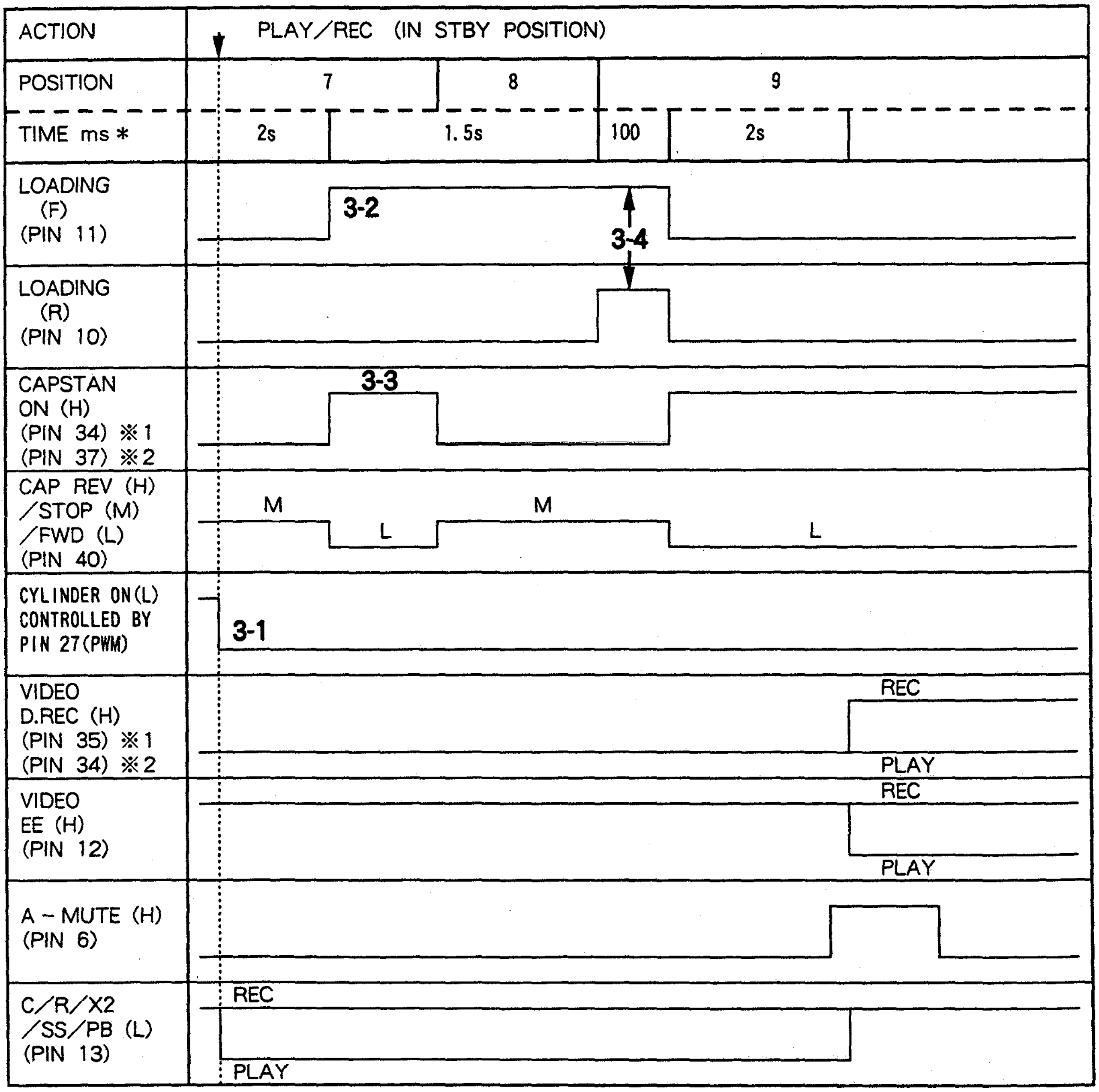
2−1. The Cassette Down (L) signal goes LOW at position 2.
(If the Cassette Down (L) signal does not go LOW even at position 2, the unit ejects the tape.)

2−2. The Loading Motor starts rotation in a forward direction.

2−3. 1) The Play idler returns to center.
2) Aim the Play Idler to the takeup side.

2−4. When the Mode Switch reaches position 3, the Loading (R) signal goes HIGH to apply a brake to the Loading Motor. Then the Loading Motor stops.

TIMING CHART 3

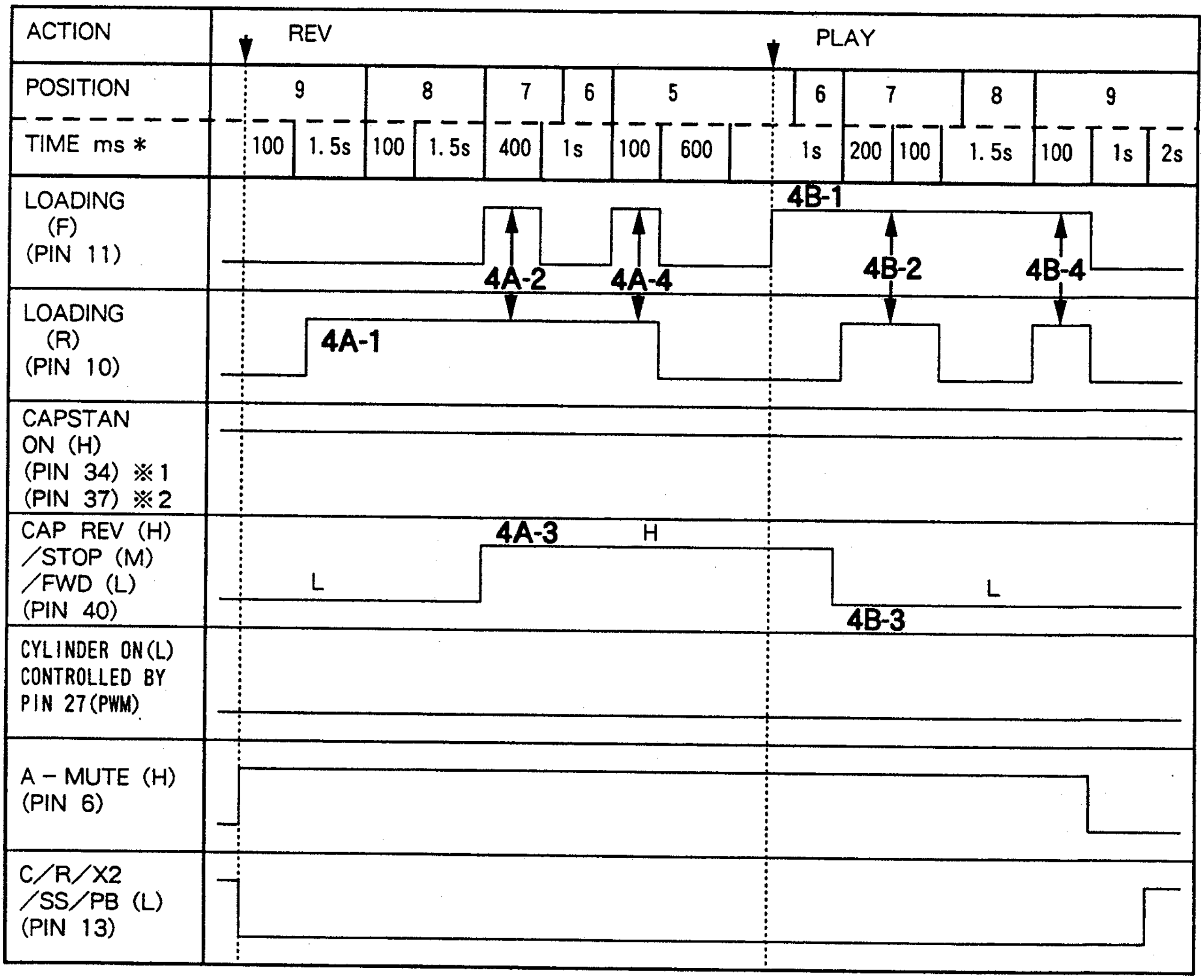

ACTION
PLAY/REC (IN STBY POSITION)
POSITION
7
8
9
TIME ms *
2s
1.5s
100
2s
LOADING (F) (PIN 11)
3-2
3-4
LOADING (R) (PIN 10)
CAPSTAN ON (H) (PIN 34) ※1 (PIN 37) ※2
3-3
CAP REV (H) /STOP (M) /FWD (L) (PIN 40)
M
L
M
L
CYLINDER ON(L) CONTROLLED BY PIN 27(PWM)
3-1
VIDEO D.REC (H) (PIN 35) ※1 (PIN 34) ※2
REC
PLAY
VIDEO EE (H) (PIN 12)
REC
PLAY
A－MUTE (H) (PIN 6)
C/R/X2 /SS/PB (L) (PIN 13)
REC
PLAY

NOTE : 1) PIN NO. WITH BRACKET INDICATES PIN NO. OF IC6001.
2) * INDICATES MAXIMUM TIME.
3) ※1 : MODEL PV-4308/PV-4311/PV-4311-K/PV-4315S/PV-4351/PV-4351-K/PV-4358.
4) ※2 : MODEL PV-4325S/PV-4355S.

MODE BY MODE OPERATION

3. PLAY/REC (FROM STANDBY POSITION)
3 – 1. The Cylinder Motor starts rotation for quick play.
3 – 2. The Loading Motor starts rotation in a forward direction.
3 – 3. The Capstan Motor rotates in a forward direction to aim the Play Idler to the takeup side.
3 – 4. When the Mode Switch reaches position 9, the Loading (R) signal goes HIGH to apply a brake to the Loading Motor. Then the Loading Motor stops quickly.

TIMING CHART 4


ACTION
REV
PLAY
POSITION
9
8
7
6
5
6
7
8
9
TIME ms *
100
1.5s
100
1.5s
400
1s
100
600
1s
200
100
1.5s
100
1s
2s
LOADING (F) (PIN 11)
LOADING (R) (PIN 10)
CAPSTAN ON (H) (PIN 34) ※1 (PIN 37) ※2
CAP REV (H) /STOP (M) /FWD (L) (PIN 40)
CYLINDER ON(L) CONTROLLED BY PIN 27(PWM)
A - MUTE (H) (PIN 6)
C/R/X2 /SS/PB (L) (PIN 13)
4A-1
4A-2
4A-3
4A-4
4B-1
4B-2
4B-3
4B-4
H
L
L

NOTE : 1) PIN NO. WITH BRACKET INDICATES PIN NO. OF IC6001.
2) * INDICATES MAXIMUM TIME.
3) ※1 : MODEL PV-4308/PV-4311/PV-4311-K/PV-4315S/PV-4351/PV-4351-K/PV-4358.
4) ※2 : MODEL PV-4325S/PV-4355S.

MODE BY MODE OPERATION

4. REVIEW

4A. PLAY TO REVIEW

4A - 1. The Loading Motor starts rotation in a reverse direction.

4A - 2. Just after the Pressure Roller and the Tension Arm are released, the Loading Motor stops.

4A - 3. While the Loading Motor is stopped, the Capstan Motor changes its direction to reverse.

4A - 4. When the Mode Switch reaches position 5, the Loading (F) signal goes HIGH to apply a brake to the Loading Motor.
The Pressure Roller is applied to the Capstan Shaft.

4B. REVIEW TO PLAY

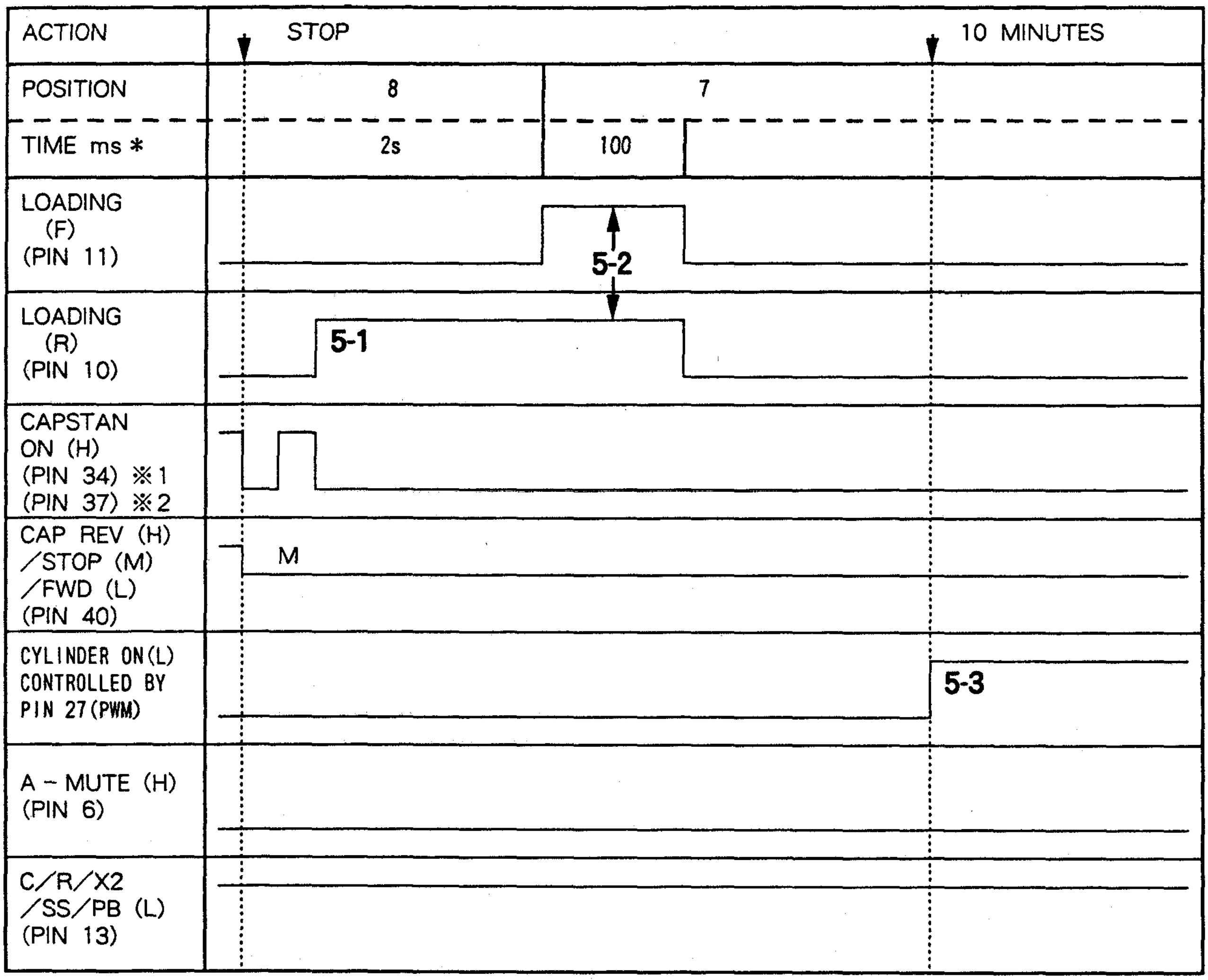
4B - 1. The Loading Motor starts rotation in a forward direction.

4B - 2. Apply a brake to the Loading Motor.

4B - 3. While the Loading Motor is stopped, the Capstan Motor changes its direction to forward.

4B - 4. When the Mode Switch reaches position 9, the Loading Motor stops.

TIMING CHART 5



NOTE : 1) PIN NO. WITH BRACKET INDICATES PIN NO. OF IC6001.
2) * INDICATES MAXIMUM TIME.
3) ※1 : MODEL PV-4308/PV-4311/PV-4311-K/PV-4315S/PV-4351/PV-4351-K/PV-4358.
4) ※2 : MODEL PV-4325S/PV-4355S.

MODE BY MODE OPERATION

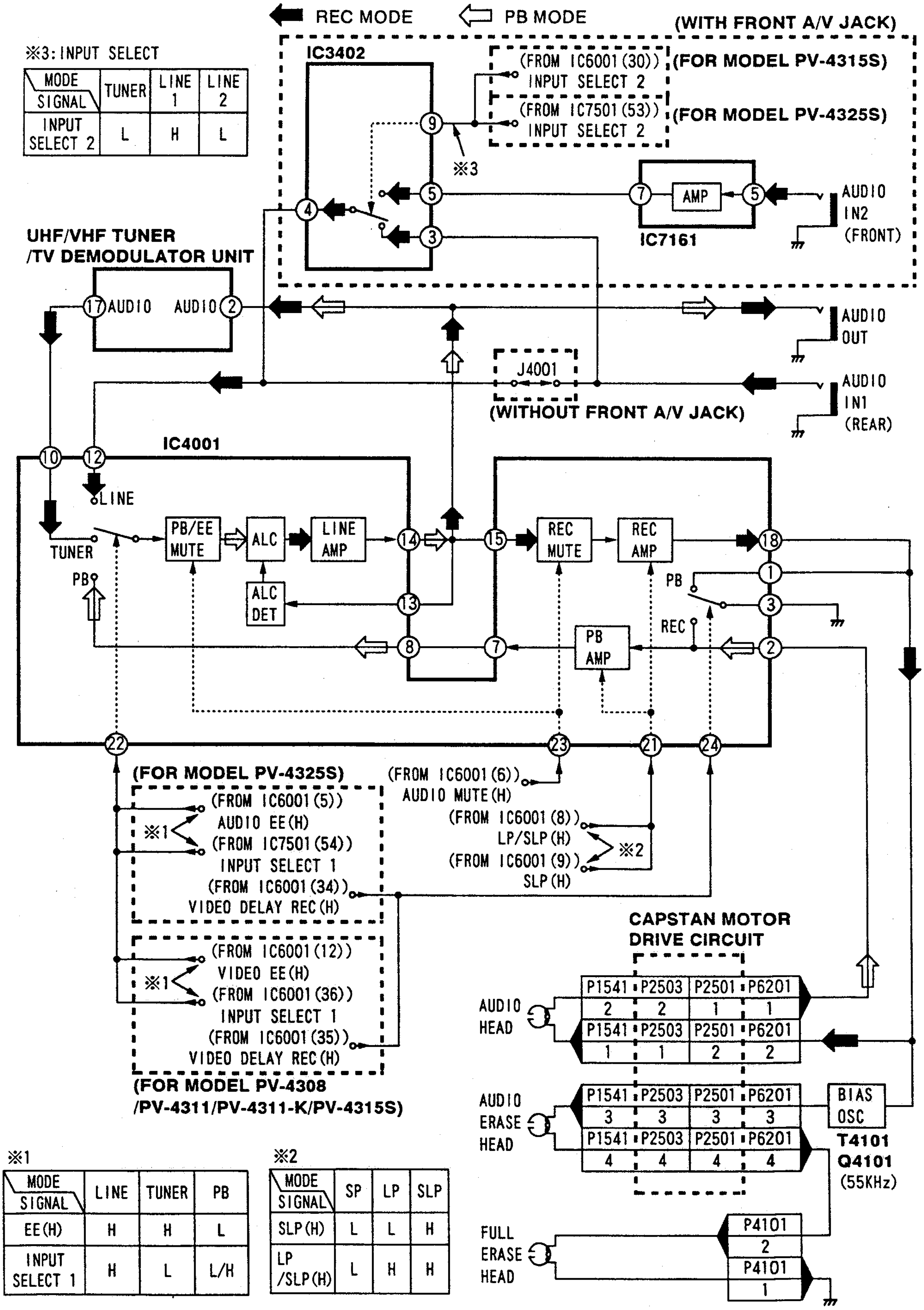
5. PLAY TO STOP/AFTER 10 MINUTES

5 - 1. The Mechanism changes the position to 7 (Standby).

5 - 2. At this position, the Pressure Roller and the Tension Arm are released to reduce the tape tension.

5 - 3. After 10 minutes, the Cylinder stops.

NORMAL AUDIO BLOCK DIAGRAM (WITHOUT Hi-Fi AUDIO)



REC MODE
PB MODE
(WITH FRONT A/V JACK)
IC3402
(FROM IC6001(30))
INPUT SELECT 2
(FOR MODEL PV-4315S)
(FROM IC7501(53))
INPUT SELECT 2
(FOR MODEL PV-4325S)
※3
AMP
IC7161
AUDIO IN2 (FRONT)
UHF/VHF TUNER /TV DEMODULATOR UNIT
AUDIO
AUDIO
AUDIO OUT
J4001
(WITHOUT FRONT A/V JACK)
AUDIO IN1 (REAR)
IC4001
LINE
TUNER
PB
PB/EE MUTE
ALC
LINE AMP
ALC DET
REC MUTE
REC AMP
PB AMP
PB
REC
(FOR MODEL PV-4325S)
(FROM IC6001(5))
AUDIO EE(H)
※1
(FROM IC7501(54))
INPUT SELECT 1
(FROM IC6001(34))
VIDEO DELAY REC(H)
(FROM IC6001(6))
AUDIO MUTE(H)
(FROM IC6001(8))
LP/SLP(H)
※2
(FROM IC6001(9))
SLP(H)
(FROM IC6001(12))
VIDEO EE(H)
※1
(FROM IC6001(36))
INPUT SELECT 1
(FROM IC6001(35))
VIDEO DELAY REC(H)
(FOR MODEL PV-4308 /PV-4311/PV-4311-K/PV-4315S)
CAPSTAN MOTOR DRIVE CIRCUIT
AUDIO HEAD
AUDIO ERASE HEAD
FULL ERASE HEAD
P1541 P2503 P2501 P6201
P4101
BIAS OSC
T4101
Q4101
(55KHz)

※3: INPUT SELECT

MODE / SIGNAL	TUNER	LINE 1	LINE 2
INPUT SELECT 2	L	H	L

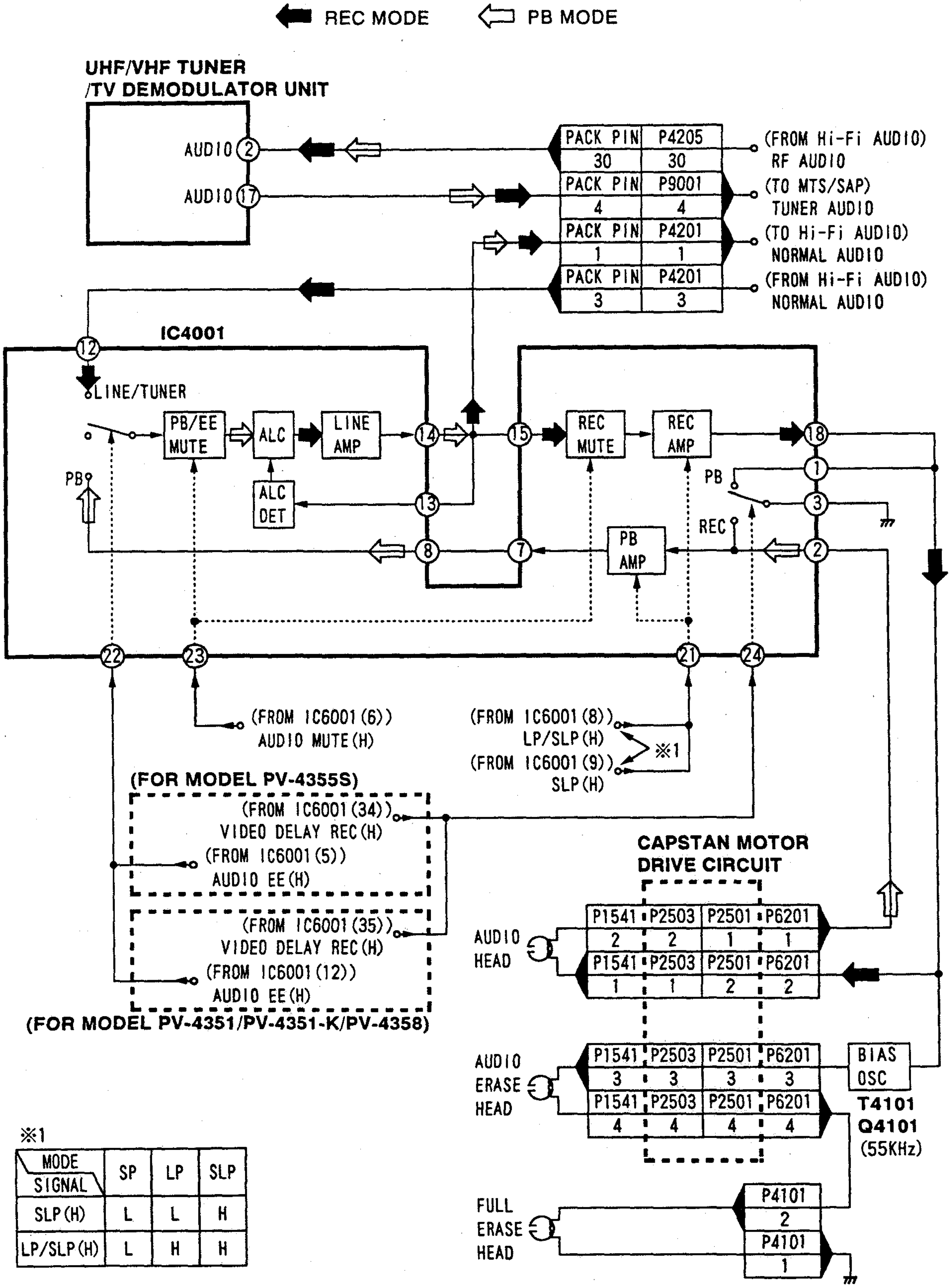
※1

MODE / SIGNAL	LINE	TUNER	PB
EE(H)	H	H	L
INPUT SELECT 1	H	L	L/H

※2

MODE / SIGNAL	SP	LP	SLP
SLP(H)	L	L	H
LP /SLP(H)	L	H	H

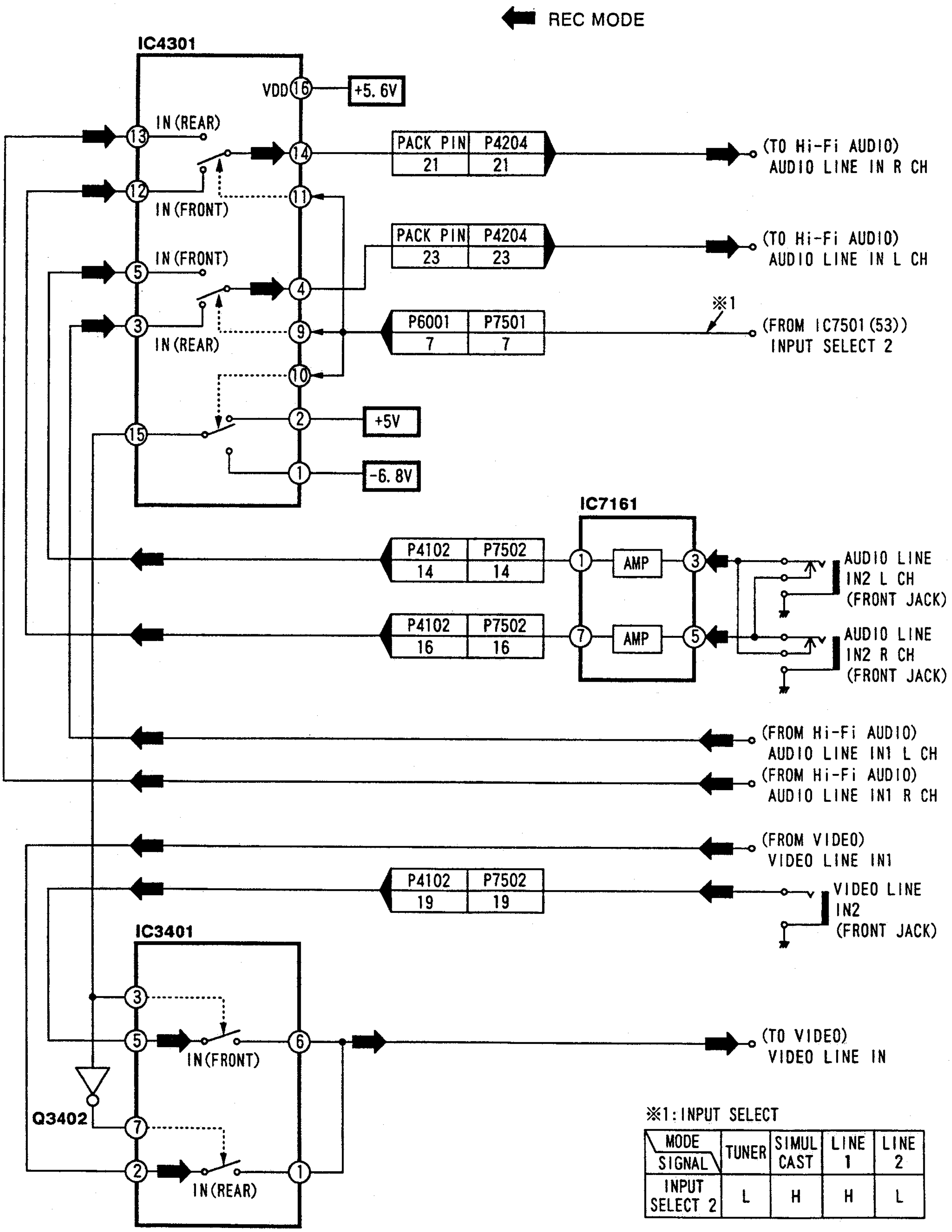
NORMAL AUDIO BLOCK DIAGRAM (WITH Hi-Fi AUDIO)


REC MODE
PB MODE
UHF/VHF TUNER
/TV DEMODULATOR UNIT
AUDIO ②
AUDIO ⑰
PACK PIN
P4205
30
30
(FROM Hi-Fi AUDIO)
RF AUDIO
PACK PIN
P9001
4
4
(TO MTS/SAP)
TUNER AUDIO
PACK PIN
P4201
1
1
(TO Hi-Fi AUDIO)
NORMAL AUDIO
PACK PIN
P4201
3
3
(FROM Hi-Fi AUDIO)
NORMAL AUDIO
IC4001
⑫
LINE/TUNER
PB
PB/EE MUTE
ALC
LINE AMP
ALC DET
⑭
⑬
⑧
⑮
⑦
REC MUTE
REC AMP
PB AMP
⑱
①
③
②
PB
REC
㉒
㉓
㉑
㉔
(FROM IC6001(6))
AUDIO MUTE(H)
(FROM IC6001(8))
LP/SLP(H)
(FROM IC6001(9))
SLP(H)
※1
(FOR MODEL PV-4355S)
(FROM IC6001(34))
VIDEO DELAY REC(H)
(FROM IC6001(5))
AUDIO EE(H)
(FROM IC6001(35))
VIDEO DELAY REC(H)
(FROM IC6001(12))
AUDIO EE(H)
(FOR MODEL PV-4351/PV-4351-K/PV-4358)
CAPSTAN MOTOR
DRIVE CIRCUIT
AUDIO HEAD
P1541 P2503 P2501 P6201
2 2 1 1
P1541 P2503 P2501 P6201
1 1 2 2
AUDIO ERASE HEAD
P1541 P2503 P2501 P6201
3 3 3 3
P1541 P2503 P2501 P6201
4 4 4 4
BIAS OSC
T4101
Q4101
(55KHz)
FULL ERASE HEAD
P4101
2
P4101
1

※1

MODE / SIGNAL	SP	LP	SLP
SLP(H)	L	L	H
LP/SLP(H)	L	H	H

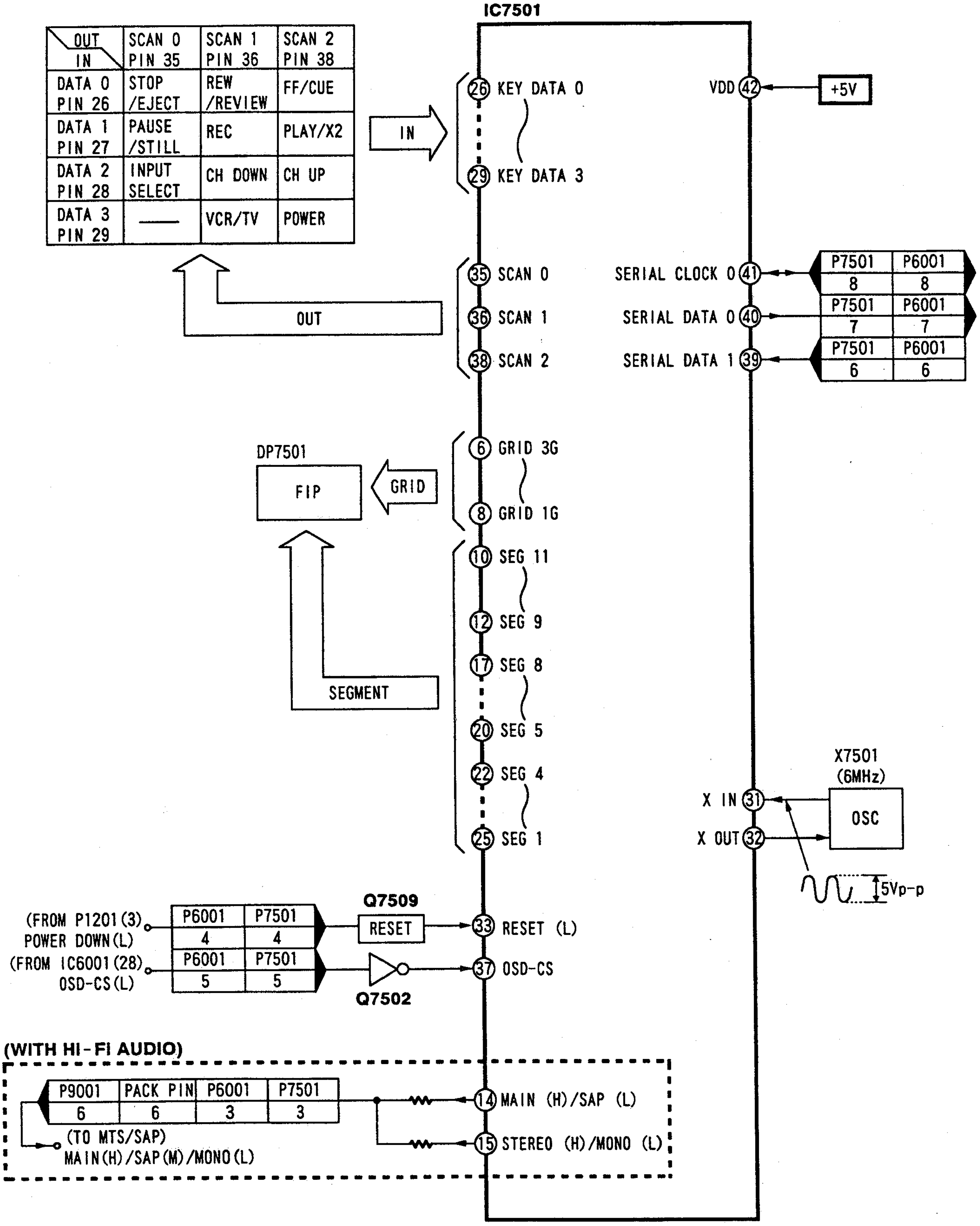
FRONT AUDIO/VIDEO JACK BLOCK DIAGRAM (FOR MODEL PV-4355S)


REC MODE
IC4301
VDD
16
+5.6V
IN (REAR)
13
14
PACK PIN
P4204
21
21
(TO Hi-Fi AUDIO)
AUDIO LINE IN R CH
12
11
IN (FRONT)
PACK PIN
P4204
23
23
(TO Hi-Fi AUDIO)
AUDIO LINE IN L CH
IN (FRONT)
5
4
3
IN (REAR)
9
P6001
P7501
7
7
※1
(FROM IC7501 (53))
INPUT SELECT 2
10
15
2
+5V
1
-6.8V
IC7161
P4102
P7502
14
14
1
AMP
3
AUDIO LINE
IN2 L CH
(FRONT JACK)
P4102
P7502
16
16
7
AMP
5
AUDIO LINE
IN2 R CH
(FRONT JACK)
(FROM Hi-Fi AUDIO)
AUDIO LINE IN1 L CH
(FROM Hi-Fi AUDIO)
AUDIO LINE IN1 R CH
(FROM VIDEO)
VIDEO LINE IN1
P4102
P7502
19
19
VIDEO LINE
IN2
(FRONT JACK)
IC3401
3
5
6
IN (FRONT)
(TO VIDEO)
VIDEO LINE IN
Q3402
7
2
1
IN (REAR)

※1: INPUT SELECT

MODE / SIGNAL	TUNER	SIMUL CAST	LINE 1	LINE 2
INPUT SELECT 2	L	H	H	L

OPERATION BLOCK DIAGRAM (FOR MODEL PV-4308 /PV-4311/PV-4311-K/PV-4315S/PV-4351/PV-4351-K/PV-4358)



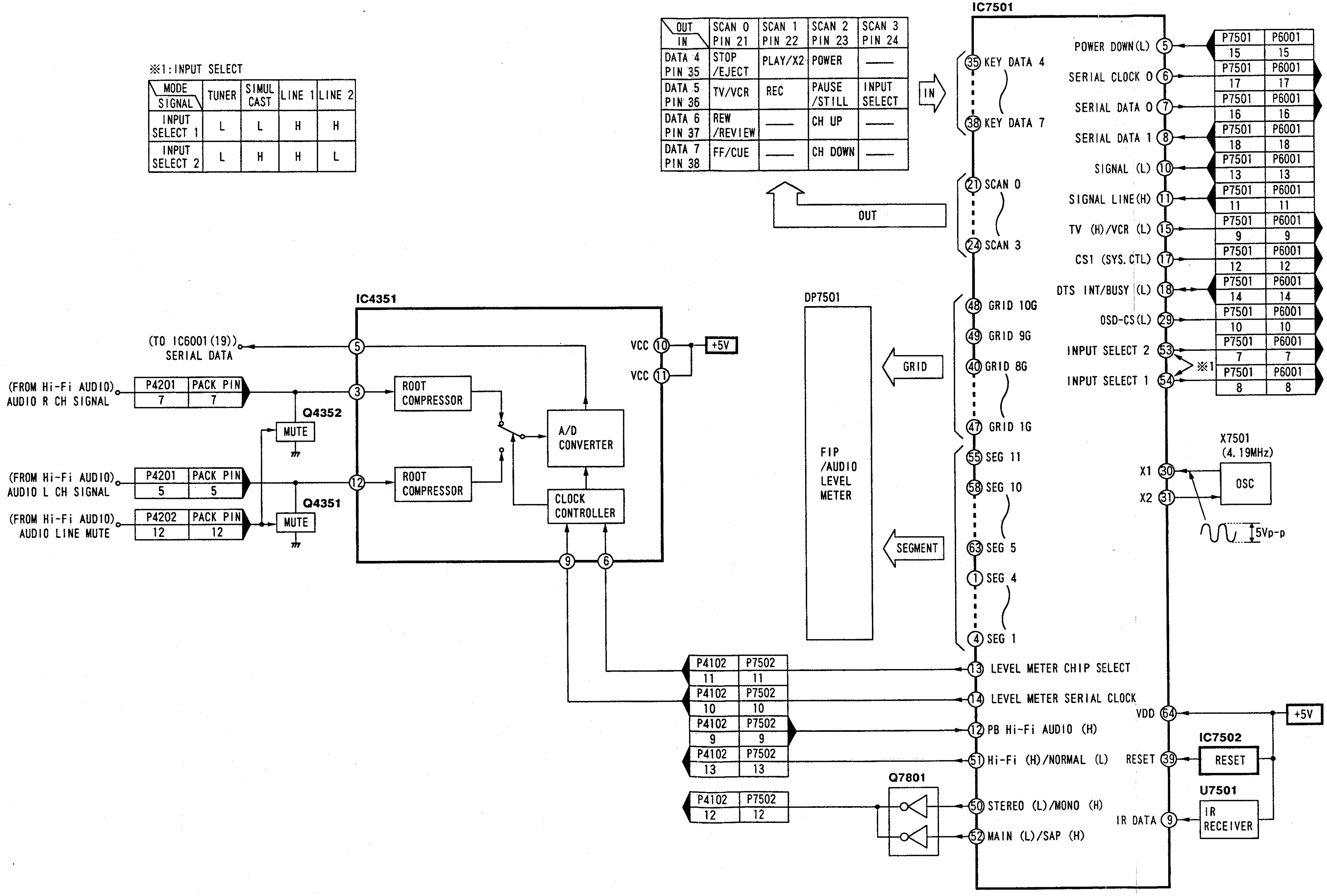
OUT / IN	SCAN 0 PIN 35	SCAN 1 PIN 36	SCAN 2 PIN 38
DATA 0 PIN 26	STOP /EJECT	REW /REVIEW	FF/CUE
DATA 1 PIN 27	PAUSE /STILL	REC	PLAY/X2
DATA 2 PIN 28	INPUT SELECT	CH DOWN	CH UP
DATA 3 PIN 29	——	VCR/TV	POWER

IC7501
IN
OUT
26 KEY DATA 0
29 KEY DATA 3
35 SCAN 0
36 SCAN 1
38 SCAN 2
VDD 42
+5V
SERIAL CLOCK 0 41
SERIAL DATA 0 40
SERIAL DATA 1 39
P7501 8 P6001 8
P7501 7 P6001 7
P7501 6 P6001 6
DP7501
FIP
GRID
SEGMENT
6 GRID 3G
8 GRID 1G
10 SEG 11
12 SEG 9
17 SEG 8
20 SEG 5
22 SEG 4
25 SEG 1
X7501 (6MHz)
OSC
X IN 31
X OUT 32
5Vp-p
(FROM P1201(3) POWER DOWN(L)
P6001 4 P7501 4
(FROM IC6001(28) OSD-CS(L)
P6001 5 P7501 5
Q7509
RESET
Q7502
33 RESET (L)
37 OSD-CS
(WITH HI-FI AUDIO)
P9001 6 PACK PIN 6 P6001 3 P7501 3
(TO MTS/SAP) MAIN(H)/SAP(M)/MONO(L)
14 MAIN (H)/SAP (L)
15 STEREO (H)/MONO (L)

TIMER/OPERATION BLOCK DIAGRAM (FOR MODEL PV-4355S)

※1: INPUT SELECT

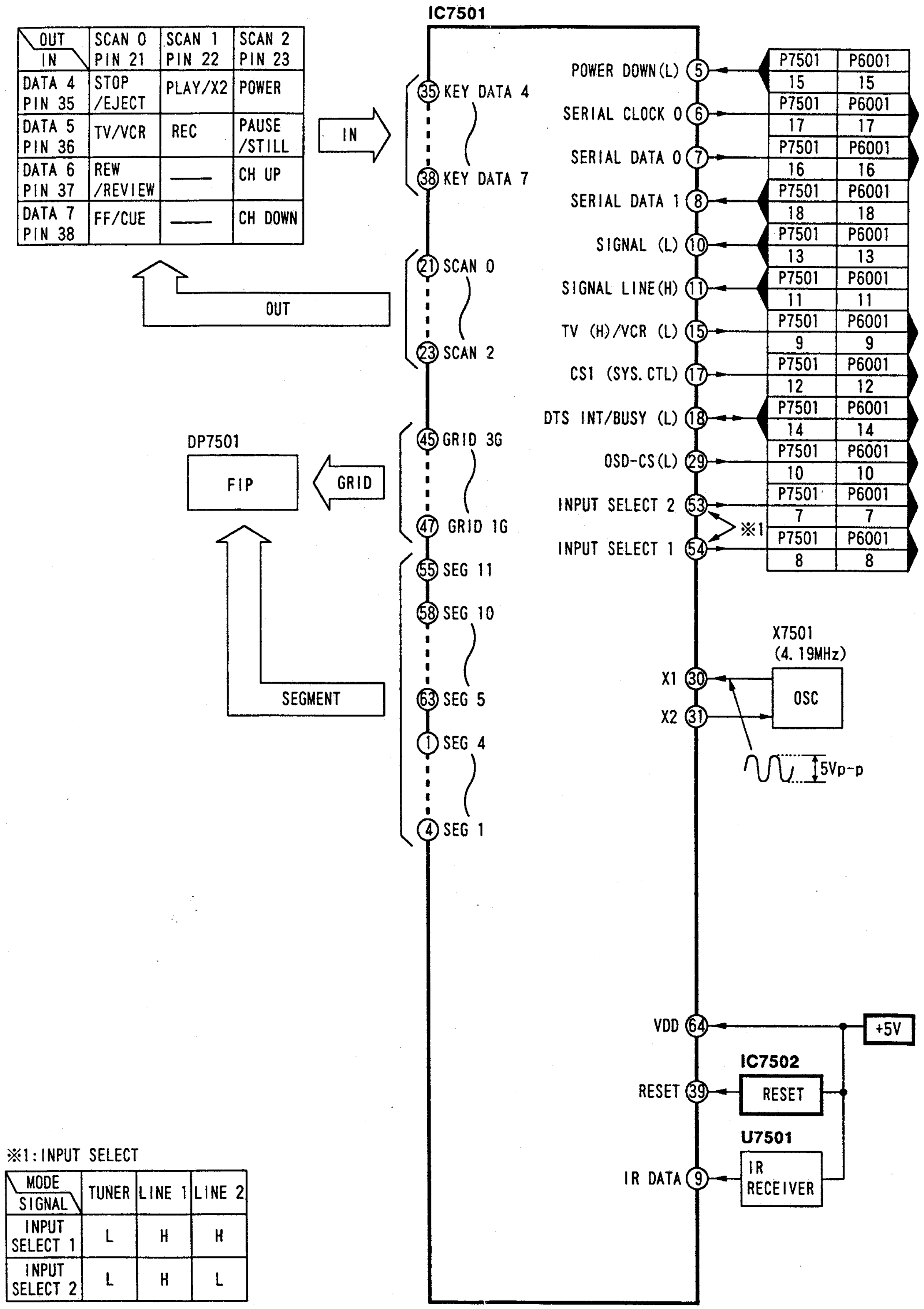
MODE / SIGNAL	TUNER	SIMUL CAST	LINE 1	LINE 2
INPUT SELECT 1	L	L	H	H
INPUT SELECT 2	L	H	H	L



OUT / IN	SCAN 0 PIN 21	SCAN 1 PIN 22	SCAN 2 PIN 23	SCAN 3 PIN 24
DATA 4 PIN 35	STOP /EJECT	PLAY/X2	POWER	——
DATA 5 PIN 36	TV/VCR	REC	PAUSE /STILL	INPUT SELECT
DATA 6 PIN 37	REW /REVIEW	——	CH UP	——
DATA 7 PIN 38	FF/CUE	——	CH DOWN	——

IN
OUT
IC7501
35 KEY DATA 4
38 KEY DATA 7
21 SCAN 0
24 SCAN 3
48 GRID 10G
49 GRID 9G
40 GRID 8G
47 GRID 1G
55 SEG 11
58 SEG 10
63 SEG 5
1 SEG 4
4 SEG 1
13 LEVEL METER CHIP SELECT
14 LEVEL METER SERIAL CLOCK
12 PB Hi-Fi AUDIO (H)
51 Hi-Fi (H)/NORMAL (L)
50 STEREO (L)/MONO (H)
52 MAIN (L)/SAP (H)
POWER DOWN(L) 5
SERIAL CLOCK 0 6
SERIAL DATA 0 7
SERIAL DATA 1 8
SIGNAL (L) 10
SIGNAL LINE(H) 11
TV (H)/VCR (L) 15
CS1 (SYS. CTL) 17
DTS INT/BUSY (L) 18
OSD-CS(L) 29
INPUT SELECT 2 53
INPUT SELECT 1 54
※1
P7501 P6001 15 15
P7501 P6001 17 17
P7501 P6001 16 16
P7501 P6001 18 18
P7501 P6001 13 13
P7501 P6001 11 11
P7501 P6001 9 9
P7501 P6001 12 12
P7501 P6001 14 14
P7501 P6001 10 10
P7501 P6001 7 7
P7501 P6001 8 8
X7501 (4. 19MHz)
X1 30
X2 31
OSC
5Vp-p
VDD 64
+5V
IC7502
RESET 39
RESET
U7501
IR DATA 9
IR RECEIVER
DP7501
FIP /AUDIO LEVEL METER
GRID
SEGMENT
P4102 P7502 11 11
P4102 P7502 10 10
P4102 P7502 9 9
P4102 P7502 13 13
P4102 P7502 12 12
Q7801
IC4351
(TO IC6001(19)) SERIAL DATA
5
VCC 10
VCC 11
+5V
(FROM Hi-Fi AUDIO) AUDIO R CH SIGNAL
P4201 PACK PIN 7 7
(FROM Hi-Fi AUDIO) AUDIO L CH SIGNAL
P4201 PACK PIN 5 5
(FROM Hi-Fi AUDIO) AUDIO LINE MUTE
P4202 PACK PIN 12 12
Q4352
MUTE
Q4351
MUTE
3
12
ROOT COMPRESSOR
ROOT COMPRESSOR
A/D CONVERTER
CLOCK CONTROLLER
9
6

TIMER/OPERATION BLOCK DIAGRAM
(FOR MODEL PV-4325S)


IC7501
IN
OUT
KEY DATA 4
KEY DATA 7
SCAN 0
SCAN 2
GRID 3G
GRID 1G
SEG 11
SEG 10
SEG 5
SEG 4
SEG 1
DP7501
FIP
GRID
SEGMENT
POWER DOWN(L) ⑤
SERIAL CLOCK 0 ⑥
SERIAL DATA 0 ⑦
SERIAL DATA 1 ⑧
SIGNAL (L) ⑩
SIGNAL LINE(H) ⑪
TV (H)/VCR (L) ⑮
CS1 (SYS. CTL) ⑰
DTS INT/BUSY (L) ⑱
OSD-CS(L) ㉙
INPUT SELECT 2 (53)
INPUT SELECT 1 (54)
※1
P7501 15 P6001 15
P7501 17 P6001 17
P7501 16 P6001 16
P7501 18 P6001 18
P7501 13 P6001 13
P7501 11 P6001 11
P7501 9 P6001 9
P7501 12 P6001 12
P7501 14 P6001 14
P7501 10 P6001 10
P7501 7 P6001 7
P7501 8 P6001 8
X7501
(4.19MHz)
X1 ㉚
X2 ㉛
OSC
5Vp-p
VDD (64)
+5V
IC7502
RESET ㊴
RESET
U7501
IR DATA ⑨
IR RECEIVER

OUT / IN	SCAN 0 PIN 21	SCAN 1 PIN 22	SCAN 2 PIN 23
DATA 4 PIN 35	STOP /EJECT	PLAY/X2	POWER
DATA 5 PIN 36	TV/VCR	REC	PAUSE /STILL
DATA 6 PIN 37	REW /REVIEW	——	CH UP
DATA 7 PIN 38	FF/CUE	——	CH DOWN

※1: INPUT SELECT

MODE / SIGNAL	TUNER	LINE 1	LINE 2
INPUT SELECT 1	L	H	H
INPUT SELECT 2	L	H	L